MINUTE BOOK.

1872-1881.

Minute Book of the
Scottish Meteorological Society
26th November 1872

— 23rd March 1881

Minute of Meeting of Council held in the Society's Chambers 26th Nov. 1872.

Present:– Sir William Hope Johnstone, in the Chair
Mr Robert Tennent
Dr Sanderson
Mr R. M. Smith
" T. Stevenson
" J. Cunningham
Professor Geikie
" Balfour
Mr A. J. Adie
Dr A. Mitchell
Mr Buchan

The Minutes of Meeting of the 22nd inst. were read and found correct.

Apology for Absence was read from Mr Milne Home.

The Hon. Treasurer made a verbal report from the Finance Committee on the following points:–

1. That up to date £143·3·6 of this Year's Subscriptions had been paid;

2. That the Hon. Treasurer's clerk receive a Salary of £26..0..0 per annum, but if the allowance to the Treasurer for his clerk calculated by the existing arrangement exceed this Sum the Clerk be entitled to the balance. This was agreed to by the Council.

3. That a Safe be got for the moneys, Minute Book, &c. belonging to the Society; a Copy

ing letter Press, a letter Book and cases for letters. This was agreed to, and it was remitted to Dr A. Mitchell, Mr R. M. Smith, and Mr Cunninghame to carry out the arrangements connected therewith.

The Hon. Secretary intimated that as authorised by the Council at Meeting of 22nd inst he had written to the Peterhead Harbour with reference to the proposed observations of Sea Temperature there.

The Secretary stated that he had written to Dr McDonald with reference to the Establishment of a station at Loch Carron, Rossshire, as directed by the Council at Last Meeting

Dr Matthews Duncan, Charlotte Sqr. was, on the recommendation of Mr T. Stevenson unanimously elected a Member of the Society £1-1-0

Rept to R.S.C.

The Council had laid before them a letter from Mr Scott, Director of the Royal Society's Committee of the Board of Trade dated 9th inst, stating that the Committee having authorized the establishment of a ~~meeting~~ Meteorological Station at Stornoway, he (Mr Scott) had entered into communication with Mr Smith, the Society's observer at that place, in order that he should make observations for the Committee, and send Telegraphic Reports.

The Council deeply regret to received this communication because they feel satisfied that the result of such a practice will if extended, tend to deprive the Society, which is maintained entirely by voluntary contributions of

of the services of those observers whom they have secured and trained at much trouble and expense.

The Council have also to state that in carrying out the instructions of the Royal Society Committee to establish a Station at Stornoway, the agreement has been overlooked which was entered into between the Royal Society Committee and this Council in 1870 (see relative documents of dates 4th and 26th April 1870) where it was stipulated by the Council and agreed to by the said Committee that the Later should not communicate with the Society's observers, except through the Council.

sent herewith

The Council cannot but think that the Royal Society's Committee has authorised the arrangements notified in Mr Scott's letter, in forgetfulness of the agreement just referred to and in ignorance of the evil consequences which are likely thus to accrue to this Society: and they have further respectfully to state that even although no such written agreement had existed, they deprecate such interference as inimical to the interests of Science.

The Council have to add that under other circumstances they would have cheerfully aided the Royal Society's Committee in carrying out so desirable an object as the proposed Establishment of a Telegraphic Reporting Station at Stornoway.

The Council further direct the Honorary Secretary before transmitting this Minute to the Royal Society's Committee to submit it to the President of the Society and to the

Chairman

Chairman of the Council, for their approval.

Minute of Meeting of Council held in Society's Chambers 18th December 1872.

Present:- Mr Milne Home in the Chair
Sir Thomas B. Hepburn
Sir W. J. H. Johnstone
Dr A. Mitchell
Mr R. M. Smith
" J. Cunningham
" A. J. Adie
" T. Stevenson
" W. T. Thomson
" Buchan

The Minutes of Meeting of 26th Nov: were read and found correct.

~~Apolog~~ Apology for absence was read from Mr Tennent.

The Honorary Secretary stated that in accordance with the instruction of the Council he had forwarded the extract minute to the Meteorological Committee in London, signed by Sir W. J. H. Johnstone Chairman, the Marquis of Tweeddale, President, and Mr Milne Home Chairman of the Council. He had since received a letter from Mr Scott dated 10. Decr. This letter having been read and considered by the Council, the following minute was agreed to, which the Honorary Secretary was requested to communicate:-

"The Council having had under consideration a letter from Mr Scott, Director of the Meteorological Committee, dated 10th inst. to the Honorary Secretary, acknowledging receipt

receipt of the Excerpt Minute of the Council of date 26th ulto see no cause for making any observations on its contents except to point out that Mr Scott has treated as one what are really two distinct matters.

The one is the formal agreement entered into between the Meteorological Committee and the Council precluding the Committee from communicating directly with the Society's Observers; and the other is ~~from~~ the application made ~~thereafter~~ thereafter to the Meteorological Committee, at the suggestion of the Board of Trade, for a portion of their Annual Grant of £ 10000. With the Latter of these this correspondence has nothing whatever to do but refers solely to the former.

The Council await an official reply from the Committee to their Minute of 26th Ulto before taking further steps in the Matter.

The Honorary Secretary read a letter from the Trustees of Peterhead Harbour intimating their resolution to ~~establish at that Harbour~~ carry out at that Harbour a System of observations on the daily Max. and Minimum Temperature of the sea with reference to the question of the herring fishing on the method which had been proposed by the Honorary Secretary.

The Honorary Secretary also stated that he had had several interviews with Professor Wyville Thomson with reference to sea temperatures and other Meteorological observations which it had been proposed to

make

make during cruise of the "Challenger"; and that Professor W. Thomson had resolved to carry out the suggestions particularly sea temperatures and the mean temperature of the air.

A letter was read from Dr Barclay Deputy-Inspector-General of Hospitals Edinburgh, asking from the Council on behalf of the Director General, a Monthly Schedule of the Meteorological Observations made at the Society's Stations ~~at~~ in Edinburgh. The Council resolved to supply the Director-General with the information asked for and the Secretary was instructed to put himself in communication with Dr Barclay with the view to carry out that object.

The Council agreed that to recommend to the General Meeting, for Election as Office bearers, the following:—

As Vice-President, Lord Lindsay
As Members of Council, Sir Alexander Milne, and Mr Patrick Dudgeon of Cargen; and in the event of any declining to act, Admiral Sir James Hope

The Honorary Secretary was requested to communicate this resolution to the Marquis of Tweeddale and to express the desire of the Council that his Lordship would communicate with Lord Lindsay with the view of ascertaining ~~wether~~ whether Lord L. would be willing to accept the Office. The Chairman was requested to communicate Sir Alexander Milne, and Sir W. J. H. Johnstone with Sir

James

James Hope in order to ascertain if they would be willing to ~~accept~~ join the Council.

Mr Buchan was directed to give an account at the General Meeting of the weather of 1872.

The following gentlemen were on the motion of the Chairman and elected Member of the Society:—

Mr William Boyd, Solicitor, 21/
Mr John Scott, Solicitor, Montrose 10/

Minute of Meeting of Council held in Society's Chambers, 20 January 1873

Present, Mr Milne Home, Chairman
Sir T. B. Hepburn
Mr Tennent
" R. M. Smith
Dr. A Mitchell
Prof. A. Crum Brown
Sir W. J. H. Johnstone
Mr Cunningham
" T. Stevenson
Prof. Balfour
Mr Buchan

Apology for absence was received from Mr W. T. Thomson.

The Minutes of Meeting of 28th Dec 1872 were read and found correct.

It was agreed that the General Meeting be held on Thursday the 30th inst at 2 PM. ~~and to~~ It was agreed recommend to the General Meeting for ~~admit~~ election as Members of Council, Sir Alexander Milne, K.C.B. and Admiral Sir James Hope, G.C.B., these gentlemen having

intimated their willingness to join the Council.

It was agreed ~~to bm~~ that the following subjects be brought before the General Meeting:

1. Report from the Council

2. Notice of Physical charts of the Atlantic Indian, and Pacific Oceans, by Sir W. J. H. Johnstone.

3 Notice by the Chairman of Reports of Recent W. Indian Cyclones, sent by the Admiralty to the Society.

4 On the Specialties of the Weather of 1872 by the Secretary.

Letters were read from Governor Rawson and Admiral Richards, ~~with~~ and accompanying documents were laid on the table, relating to certain recent West Indian Hurricanes, which the Chairman at the request of the Council agreed to bring before the General Meeting.

A Letter were read from the Director General thanking the Council in having acceded to his application for a ~~Monthly~~ Schedule of Observations made at the Society's Station in Edinburgh to be supplied to him monthly.

Dr. Mitchell laid on the table a Paper on Ozone which had been sent to him as convener of the Ozone Committee by Dr. Moffat of Hawarden. He also made a verbal report on what had recently been done with reference to Ozone.

It was intimated that the Instruments supplied by Mr. R. M. Smith to the Station at Manaós, were despatched, and that the Consul General for the Brazils at

Liverpool has courteously agreed to assist the Society in securing their safe transit, & sealing them against inspection till they arrived at their destination.

On the motion of the Chairman, Admiral Sir James Hope, was elected a Life Member, on the recommendation of Sir W. J. H. Johnstone £10..10..0

and Dr. David Page, Kirkby Lonsdale, Westmorland, a Ordinary member £0..10..6

A letter was read from Mr. Scott, together with a Minute from the Meteorological Committee with reference to the ~~Station~~ Stornoway Observer.

After a lengthened conversation, it was remitted to a Sub-Committee consisting of Mr. Stevenson (Convener) Sir W. J. H. Johnstone, Mr. Cunningham, and Dr. Mitchell to frame a Minute to be sent to the Meteorological Committee in reply to their Minute of the 13th inst.

Sent to London Committee

The Council having had read to them a Minute from the Meteorological Committee of the Board of Trade, dated 13th inst in which they state that the appointment of the Society's observer at Stornoway to be the Telegraphic Reporter for the Meteorological Committee at that place is a matter which simply concerns the relations between the Society and that gentleman and further that they have considered that the basis of an arrangement between themselves and the Scottish Meteorological Society had been abandoned. ~~The~~

The Council admit that the question rests exactly as the London Committee has

stated, viz The relation between the Scottish Society and its own observer who has been appropriated by the London Committee without any previous communication through the ~~Council~~ Scottish Society who feel that they cannot hope to command as heretofore the Services of their observer for they are unable to offer him any payment while the London Committee backed ~~by~~ with Government Money can pay him and will thus command his services to the exclusion of the Scottish Society - The council object ~~to~~ to such an interference with their observers and protest against what they consider as a Misapplication of the Government Grant which is thus employed in destroying the influence of the Scottish Society over an observer who was trained by themselves in their own office in Edinburgh under the Secretary's immediate superintendance. Even although no agreement had been entered into between the two bodies for the protection of the Society's interests, the Council conceive that in common fairness and courtesy they should first have been consulted as to whether the proposed arrangement might not interfere with the observations which have been sent to them from Stornoway for the last 18 years. But in point of fact an agreement for protecting the Scottish Society against such interference was entered into by both bodies, - which agreement the

London Committee now, in justification of their recent proceedings declare to has been abandoned, but which the Council can easily shew to be still existing in full force.

The truth is the London Committee has confounded two separate Matters and has quoted a passage from the Council's Memorial, dated 14th June 1870, relative to the failure of the Negociations regarding one of these Matters as if it had referred to both; whereas they were wholly distinct. The one emanated from the Scottish Society and Solicited a share of the London Committee's Annual Grant, which application was rejected by the London Committee. The other emanated from the London Committee and had reference to dealings between the two bodies in the prosecution of Meteorology, which application was agreed to by both bodies and it was at the same time stipulated that all communication with the Scottish Society's observers should be made through the Council of that body. Those applications were made at different dates.— that by the London Committee being on the 19th January 1870, and that by the Scottish Society being on 26th April of the same Year.—

It will thus be seen that the applications were made at different dates and emanated from different parties. The first was rejected, while the other was agreed to by both bodies and still remains binding upon them

But the Council of the Scottish Society feel that ~~though~~ in the prosecution of science some bond of a far higher nature than mere obligations in writing ought to protect their interests. Supposing as already stated that no arrangements had ever been made between the parties debarring the London Committee from communicating directly with the Scottish Society's observers they would ask whether it be consistent with fairness that the London Committee aided by £10.000 Grant from Government should not only refuse to give any ~~[illegible]~~ portion of their large Grant to the Scottish Society when that Society applied for it at the suggestion of the Board of Trade, but should employ this Grant of public money to the serious injury of the Scottish Society which depends wholly on voluntary Subscriptions from private individuals, and which as regards money is comparatively helpless, but which as regards scientific arrangements and provisions, to say nothing of the original investigations which have been promoted by it, has been acknowledged to have done good work in Meteorology.

Unless the Council have an assurance from the Committee that they will hereafter hold themselves bound by to their agreement and communicate with no other of the Society's observers except through the the council, they though most reluctant to adopt such a course must now in order

to prevent the most serious consequences which must result to the Society, from a superior power derived from the Grant of public money to the London Committee, take instant measures for protecting their interests in such manner as they may find to be most expedient.

Minute of Meeting of Council held in Society's Chambers on 29th January 1873.
Present Mr. Milne Home, in the chair
Sir William J. Hope Johnstone
Mr. R. Tennant
Dr. A. Mitchell
Mr. A. J. Adie
Mr. Buchan
Apologies for absence were received from Professor Balfour, and Mr Stevenson.
The Minutes of Meeting of 20th inst were read and found correct.
A conversation took place regarding the subjects to be brought before the Meeting in the Report from the Council, ~~which~~ This Report to be read at the Meeting of Council tomorrow which it was agreed to call half an hour before the General Meeting.
Dr. Mitchell made a further verbal Report of what had been done by the Ozone Committee, and intimated that he had prepared a Report from the Committee to be laid before the General Meeting.
Sir William J. Hope Johnstone laid on the Table two volumes, viz – The Cruise

of the Dolphin', and 'United States Coast Survey 1850' containing some valuable information regarding Sea Temperatures and Currents, which he courteously offered in loan to the Society. The cordial thanks of the Council were given to Sir William for the loan of the Books.

Minutes of Meeting of Council held in 5 St Andrew Square, on 30th January 1873.

~~The Minutes of Meeting of 29th inst. were read and found correct~~

Present Mr. Milne Home, in the Chair

Dr. Mitchell
Mr. Tennent
" T. Stevenson
" A. J. Adie
" J. Cunningham
" R. M. Smith
Professor Balfour
Sir William J. Hope Johnstone
Sir Thomas B. Hepburn
Mr. Buchan

Mr. Miller M.P. was present on the invitation of the Council, and a letter of apology for absence was received from Mr. D. McLaren, M.P. who also had been invited.

The Minutes of Meeting of 29th inst. were read and found correct.

The Marquis of Lothian, was on the recommendation of the Lord Henry Kerr elected a Member of the Society; and

Mr. H. E. Höst
~~H. E. Höst, Esq.~~ Judge Royal, Thorshavn, Faröe, ~~those~~ and Mr. J. Dix. Weatherly, Manaós, Brazil, the Society's observers at these places respectively were elected corresponding Members of the Society.

The Report from the Council to the General Meeting was read by the Chairman and adopted by the Council.

Dr. Mitchell read a Report from the Ozone Committee which he was requested to read to the General Meeting.

Mr. Stevenson and Dr. Mitchell referred to the services Professor Tait was rendering to the Ozone Committee and suggested that he should be elected an Honorary Member of the Society. To this the Council agreed.

A conversation then took place with Mr. Millar during which the position of the Society with reference to the Meteorological Committee of the Board of Trade was explained to him and who sympathized with the Society and stated his willingness to assist the Society and cooperate with the Society in ~~the~~ matter

Minutes of Meeting of Council held in Society's Chambers on 25th February 1873.

Present Mr. D. Milne Home, in the Chair
Mr. R. M. Smith
Prof. Balfour
Mr. T. Stevenson
" J. Cunningham,
Sir William J. Hope Johnstone
Mr. Buchan

Apologies for absence ~~from~~ were received

from Mr. W. J. Thomson Dr. Mitchell, Mr. A. J. Adie and Sir Thomas B. Hepburn.

The Minutes of the Meetings of 29th and 30th January were read and found correct.

A letter was read from Professor Tait thanking the Council for in having elected him an Honorary Member of the Society.

A letter was read from Mr. Scott, dated 18th February 1873, being the reply from the Meteorological Committee to the Council's Minute dated 20th January 1873. The following Minute in answer thereto was agreed to and the Honorary Secretary was instructed to transmit it to the Meteorological Committee:—

Minute sent

The Council of the Scottish Meteorological Society have received the Meteorological Committee's letter of the 18th current, and have now to reply to the statements therein contained.

The London Committee state "that they neither have had nor have any "intention of interfering with the returns "supplied from Stornoway to the Scottish "Meteorological Society."

The Council in reply have to ~~state~~ that they never alleged that their "returns" from Stornoway were to be interfered with. What they did state and what they now reiterate is that the London Committee have interfered with ~~their~~ Observer, and this allegation is admitted ~~not disputed~~ by the Committee.

The London Committee state that ~~they~~ "before they arranged for the services of the

"observer at Stornoway they required him
"to give an assurance that the Scottish
"Meteorological Society should be in no way
"prejudiced by his undertaking his new
"duties."

Surely the Scottish Society were the proper judges in such a case and should have been the first parties to be consulted as best qualified to form a judgment as to the peculiarities of their own system of management.

The Council regret to observe that the London Committee content themselves with alleging that the protective clauses of the agreement which were framed ~~which was entered into~~ solely for the ~~protection of the~~ Scottish Society's interests was no longer binding upon them, — which statement even ~~last~~ had it been correct, would have furnished no justification of their entire disregard of the feelings expressed by the Society. A word or two however will be quite sufficient to disprove the allegation that the agreement is no longer binding on the two bodies.

The London Committee state that the Minute of Council of the Scottish Meteorological Society (April 26th, 1870) was modified by the application to them for a grant of money "to engage a clerk and other assistants."

So far from this being the case, the quotation which has just been made bears ~~on~~ the face of it a reference to a matter totally different from what is now in dispute, viz., the application by

the Society to the London Committee for a share of the annual Grant. Both parties admit that this proposal fell to the ground. It seems strange that it should be necessary to repeat that there were two wholly separate matters, originating at different dates and emanating from different parties.

The London Committee state that they have had no official reply to Mr. Scott's letter of 16th May 1870, nor any intimation of the readiness of the Society to afford such co-operation as was asked.

The letter referred to required no answer whatever, and the readiness of the Society to co-operate had been previously expressed. Mr Scott's letter contained the rejection ~~of~~ by the London Committee of the Society's application for a share of the Grant; but it also contained directions for carrying out the agreement for the Society supplying the information asked for by the London Committee in the ~~following~~ terms ~~It states how the~~ Forms are to be filled up, and adds that "the expense incurred from time "to time in obtaining and forwarding this "information the Meteorological Committee "are prepared to defray."

Thus it is clearly beyond all reasonable challenge that the proposal agreed to on the 4th April 1870 by the London Committee, and homologated by the Council on the 26th April 1870 was accepted and acted upon in the subsequent issue of specific directions from the Committee

~~as to the manner in which the Forms~~ were to be filled up, and as to the payment of the expenses as they fell due. Subsequently to all this and in accordance with Mr. Scott's letter (16th May 1870), an application was made by a letter dated 20th September 1870 for "returns" from several of the Society's Stations relative to the "City of Boston" Storm and the information asked for from the Society was duly forwarded to the London Committee in terms of the arrangement. In further corroboration of this view, though such seems to be supererogatory, Mr. Buchan leads the Council to understand that so late as November last Mr. Scott, in justification of the Stornoway appointment, stated that he had been waiting more than two years for further information under the agreement and that as this had not been supplied he concluded that the Scottish Society wished to discontinue all negotiations with the London Committee. This statement shews, what Mr. Scott will not dispute, that at that date (November 1872) he considered the agreement binding.

The London Committee state in the conclusion of their letter that their action "is simply directed to the gradual development "of the scheme of General Meteorology of the "United Kingdom"

The Council fully approve of this object and as stated in a former letter they would under other circumstances have been ~~glad to have co-operated with them in the~~

~~work, what they complain of is the development~~ of this scheme to the detriment of the ~~Scl~~ Scottish Meteorological Society.

The Council fail to find in the Committee's letter any expression of regret for having in carrying out the Stornoway appointment acted contrary to the wishes of the Scottish Society as well as to the terms of the agreement; and while the London Committee disclaim in words any intention to injure the Society they clearly indicate that they are fully determined to employ the Government Grant for what may indeed be the gradual development of a scheme of British Meteorology but which ~~they~~ the Society consider involves also the gradual extinction of their own Stations.

Under the circumstances stated, the Council decline to hold any further communication with the Meteorological Committee on this subject, and will now take other and immediate steps for vindicating their ~~position and protecting their interests.~~

"The Form" (a printed copy of which accompanied the letter) "is to be filled out whenever a "storm or a very sudden change of weather is "noticed, and also occasionally when specially "requested by letter". The letter concluded as follows.– "The expense incurred from time "to time in obtaining and forwarding this "information the Meteorological Committee are "prepared to defray."

It thus appears that the same letter which rejects the Society's application for a share of the annual Grant ratifies and

confirms the agreement of 4th and 26th April 1870. Subsequently to all this the Committee acted upon the agreement by obtaining information as provided for by the words "when specially requested by letter," on 20th September 1870, when an application was made to the Society for returns from several of the Society's Stations relative to the 'City of Boston' storm and the information was duly forwarded to the London Committee. In further corroboration of this, though such proof seems to be superfluous, Mr Buchan has informed the Council that so late as November last, Mr Scott, in justification of the Stornoway appointment, stated that he had been waiting for further information under the agreement and that as this had not been supplied he concluded that the Scottish Society wished to discontinue all negotiations with the London Committee. This statement shews what Mr Scott will not dispute, that up to that date (November 1872) being two years & a half after the agreement was concluded he considered the agreement binding.

The London Committee state in the conclusion of their letter that "their action is "simply directed to the gradual development "of the Scheme of General Meteorology of the "United Kingdom"

The Council fully approve of this object, and as mentioned in a former letter they would under other circumstances have been glad to have co-operated with them in the work; what they do complain of is the development of this scheme to the detriment of the Scottish Meteorological

Society.

The Council fail to find in the Committee's letter any expression of regret for having, in carrying out the Stornoway appointment, acted contrary to the wishes of the Scottish Society, to say nothing of the terms of the agreement; and while the London Committee dis-claim any intention to injure the Society they clearly indicate that they are fully determined to employ the Government Grant for what may indeed be the gradual development of a Scheme of British Meteorology but what the Society consider involves also the gradual extinction of their own Stations.

Under the circumstances stated, the Council decline to hold any further communication with the Meteorological Committee on this subject, and will now take other and immediate steps for vindicating their position and protecting their interests.

end of Minute sent

It was resolved to print the correspondence connected with the appointment of the Society's Observer at Stornoway, and to forward it to the Board of Trade along with a letter signed by the President of the Society asking for the advice and assistance of the Board in this matter.

The Secretary intimated that he had recently visited the Society's Stations at Annanhill, Paisley, Glasgow, Ridge Park and The Glen, and inspected the instruments, which he found in good working order, with

one or two slight exceptions which have since been rectified.

The Council authorized the insertion of the following Papers in the forthcoming Number of the Society's Journal, viz.—

1 Report of the Council to the General Meeting held on 30th January 1873.

3. Letter ~~from~~ to the Secretary from Prof. Mohn Christiania

The following gentlemen were on the motion of the Chairman unanimously elected Members of the Society.—

Dr. George F. Bearden, Clifton	£1"0"0
William Wood, Esq. C.A. 4 Oxford Terrace	1"0"0
Jonathan Thomson, Esq. 136, West George St. Glasgow	1"0"0

Minutes of Meeting of Council held in Society's chambers, on 3rd April, 1873.

Present Mr. Milne Home, chairman,
Sir Thomas B. Hepburn, Bart
Mr. R. Tennent,
Dr. A. Mitchell
Sir W. J. Hope Johnstone
Mr. W. T. Thomson
" James Cunningham
" Alexander J. Adie,
" R. M. Smith.
Professor Balfour Mr. D. Stevenson
Mr. Buchan

The Minutes of Meeting of 25th February were read and found correct.

With regard to the recent correspondence

The Honorary Secretary made a verbal statement regarding interviews he had recently had, when in London, with Admiral Sir

Alexander Milne, Admiral Richards, Sir Edward Sabine, and Mr. Scott.

The Secretary read a letter he had received from Bishop Eden, one of the Society's Members, with reference to the Correspondence with the Meteorological Committee ~~sent~~ which has been transmitted to the Board of Trade. The Secretary was requested to write Bishop Eden and inquire if he would be willing to permit the Council to make use of this letter, by publishing it, or otherwise, in the event of the answer of the Board of Trade being such as to call for further action on the part of the Council in protecting the Society's interests.

Mr. Buchan laid on the table a Report on the state of the Society's stations at Glasgow, Paisley, Annanhill, Ridge Park, The Glen, and Fettes College, which he had recently visited.

Mr Buchan intimated that ~~the~~ a complete set of Instruments had been procured for Fettes College, near Edinburgh, and that the observations which were to be conducted under the immediate superintendence of the Mathematical Master of the ~~School~~ College and his Assistant, had been begun. The Council thereupon agreed to sanction this as one of the regular Stations of the Society.

Communications were read from Dr. Buys Ballot, Utrecht, and Padre Denza director of the Moncalieri Observatory, Italy, asking for observations from several of the

Society Stations for certain specified periods. The Secretary was directed to comply with these requests.

A letter was read from Captain Finlay of Deanston, intimating that the observations at that Station which had been interrupted on the death of his father were again to be resumed.

A letter was read from Mr. Sang, C.E. Kirkcaldy, to the Chairman, dated 13 March 1873, detailing certain observations which had been made by him with the view of comparing the readings of Fleming's Rain Gauge, with an ordinary funnel Gauge. The Secretary was instructed to communicate with Mr. Sang with reference to this matter.

Maury Mr Buchan having reported the death of Commodore Maury one of the Honorary Members of the Society, and having also laid on the table a Biographical Sketch of the deceased, transmitted to this Society from the Virginia Military Institute of the United States, the Council agree to record upon their Minutes an expression of the great loss sustained by the scientific world, in consequence of the death of this distinguished man. The deep respect in which he was held by his countrymen is well indicated by the order given, that the Library Hall of the Institute in which he was a Professor should be kept draped in mourning for a period of 30 days; that the drooping flags of Virginia and Tennessee be placed over the bier on the day of his funeral; that the State flag be displayed at half-mast; and that the President of the United States be requested to notify his death to the Representatives of Foreign Countries at Washington.

Commodore Maury was distinguished as an Astronomer, as a Scientific Sailor, as a Meteorologist and latterly as a ~~Scientif~~ Scientific agriculturist. He was the first to begin deep sea soundings in the Atlantic; as also to deduce from the Log-Books of Ships important and useful information regarding the principal currents of the ocean, and the prevailing winds. The stimulus which he gave to such investigations was not confined to America, but extended to Europe. His treatises were translated into many Foreign Languages; and are now respected and valued as important and reliable Text Books.

He corresponded with Mr Buchan on several subjects; and was pleased ~~to~~ more than once to express approval of the operations of our Society.

Minutes of Meeting of Council held in Society's chambers on 28th April 1873.

Present Mr. Milne Home in the Chair
Sir Thos. B. Hepburn,
Mr. R. M. Smith
" James Cunningham
" Thomas Stevenson
Professor Balfour
Dr. Arthur Mitchell
Mr. Buchan

The Minutes of Meeting of 3rd April 1873 were read and found correct.

Apologies for absence were received from Admiral Sir W. J. Hope Johnstone, Mr. Tennent, and Mr W. T. Thomson.

The Secretary read a letter which he

had received from Bishop Eden in which he expressed his readiness to place his letter of 22nd March at the disposal of the Council

A letter was read from the Board of Trade dated 23d April, enclosing a letter from the Meteorological Committee to the Board of Trade dated 1st April 1873, in which the Meteorological Committee expressed their readiness to conform to the wish of the Council, viz "that Observers furnishing information to them should not be engaged to observe also for the ~~Sci~~ Committee, without the previous concurrence of the Council of the Scottish Meteorological Society".

The Council expressed their entire satisfaction with the result of this correspondence and remitted it to a Committee to prepare and forward an answer to the Board of Trade in accordance therewith — the Committee to consist of Mr Stevenson, Convener, Mr Cunningham, Dr Mitchell, and Professor Balfour.

answered 2d May p. 24-25

The Chairman stated the result of an interview which he and the Secretary had had with Mr D. McLaren, M.P., with reference to the ~~question~~ correspondence between the Council and the Meteorological Committee, and with reference to the Society's claim for a Grant from Government, — ~~it~~ in which Mr McLaren expressed his cordial sympathy with the Society and his readiness to support the Society's interests in Parliament and ~~the~~ otherwise. A conversation ~~take~~ took place

on the subjects and the Chairman was requested to write Mr. McLaren in accordance with the views expressed.

A letter was read from the Science Organization Committee of the British Association inquiring what unpublished Meteorological information the Society possesses, and the terms, if any, on which the Council would be prepared to open up this information to scientific men. The Council directed the Secretary to answer this letter stating that the Council have hitherto supplied copies of any portion of the unpublished Meteorological information they possess to all Meteorologists, and other scientific men, who have applied for it, free of charge; and that they will be glad still to continue to do ~~in~~ so, in so far as the very limited means at their disposal will enable them.

answered 13th May 27-30

On the motion of the Chairman, Mr. James Blackie, Mathematical Master, Fettes College, 10/6 was elected a Member of the Society.

Minutes of Meeting of Council held in Society's Rooms on 19th May 1873.

Present:— Mr Milne Home in the Chair
Sir Thomas Buchan Hepburn
Professor Balfour
Mr Robert Tennent
" R. M. Smith
" J. Cunningham
" A. J. Adie
Dr Mitchell

Mr Stevenson
Admiral Sir W. J. Hope Johnstone
Mr Buchan

The Minutes of Meeting of 28th April were read and found correct.

The Council had letters read from Mr McLaren and Mr Lyon Playfair explaining what had been said by them and by Mr Baxter in the House of Commons, on the occasion of the Grant for £10,000 for Meteorological purposes being moved for. The Chairman also read a Newspaper Report of the Debate.

The Council agreed to to express their cordial thanks to Mr McLaren, Mr Lyon Playfair, and Mr Miller, for what they said in support of the Society's claims to public support, and their satisfaction with the answer given by Mr Baxter.

The Council requested Mr Buchan to send an Excerpt from this Minute to Mr McLaren, asking him to have the goodness to shew it to Mr Lyon Playfair and Mr Miller.

A letter was read from Mr G. J. Symons, intimating that Mrs Nunes, in consideration of the great interest which ~~his~~ her husband the late Francis Nunes, Esq of Chislehurst, M.A. &c took in the welfare of the Scottish Meteorological Society, had resolved to offer for the unconditional acceptance of the Society a selection from ~~these~~ his Standard Instruments.

The Instruments which had been selected by Mr Symons were, with their certified verifications, laid on the table, consisting of the following. —

Standard Dry Bulb, by Pastorelli No 506
" Wet " " " 507
" Maximum " " 318

Standard Minimum by Pastorella No 185
" Maximum in vacuo by Negretti " 9770
" Minimum for grass " Casella " 10045
Robinson's Anemometer by Negretti " 180

The Council request their Secretary, ~~Mr Buchan~~ in ~~acknowledging~~ intimating to Mr Symons their grateful acceptance of these Instruments, to ask him to be so good as to convey to Mrs. Nunes their very cordial thanks for the interest she has taken in the Society ~~for~~ and for the valuable ~~present of~~ Standard Instruments which she has presented ~~to the Society~~.

A communication, addressed ~~was read~~ to the President and Council ~~was read which~~ from the Committee appointed by the Conference at Leipsig to prepare a Report on Weather and Storm Signals in Europe for the Vienna Congress, was read ~~was read~~. The Secretary read answers to the queries of the circular which he had prepared. The Council approved of these answers, and directed the Secretary to submit them to the Marquis of Tweeddale for his Lordship's approval, before transmitting them to Mr. Scott, the Secretary of the Committee for the British Isles.

The Secretary read a letter which he had received from Dr. Jelinek, the Convener of the Committee entrusted with making the arrangements for the organization of the Meteorological Congress which is to be held in Vienna in September next, from which it appeared that no British Meteorologist could attend the Meetings of the Congress as a Member unless he be sent as a Delegate by H. M. Government.

The Council agreed that a letter be sent to the Government with the request that in nominating the Delegates to be sent as Members of the Congress they would be pleased to include among the number their Secretary Mr Buchan, who would represent the Scottish Meteorological Society.

A draft letter for this purpose which had been submitted to the Marquis of Tweeddale and approved of by his Lordship, was read. This letter the Council approved of and they resolved to request his Lordship to forward it to H. M. Government.

A paper was laid on the Table on "The Mean Inclination of the Wind from Higher to Lower Pressures" by the Rev. W. Clement Ley. It was agreed that an Abstract of this Paper appear in the Society's Journal.

Minutes of Meeting of Council held in Society's Rooms on 2 June 1873.

Present Mr D. Milne Home, in the chair
" Thomas Stevenson
" R. M. Smith
" Robert Tennent
" A. J. Adie.
" A. Buchan

Apologies for absence were received from Dr. Arthur Mitchell, Sir T. B. Hepburn, Mr. Cunningham, and Professor Balfour.

The Minutes of Meeting of 19th May were read and found correct.

The Honorary Secretary gave a verbal account of an interview he had had, while in London, with Mr. Scott, regarding the Grant to the

Society. After some conversation thereupon the Council agreed to take no steps for a week or two with regard to this matter.

The Secretary read a correspondence he had had with Sheriff Tennant, and Mr. Wilson, Manager of the Greenock Water Works with reference to the obtaining of an Observer for Greenock in room of the late Mr. Anderson, their observer there. The Council instructed Mr. Buchan to go to Greenock in order to make arrangements regarding the new observer and proper positions for the instruments.

It was resolved to hold the General Half-yearly Meeting on Wednesday the 2nd July and that the subjects to be brought before the Meeting be,

1. The Herring Fisheries in relation to Meteorology

2. On some of the Conditions which influence Local Climates.

The Secretary was instructed to draw up an Estimate of the value of the Instruments at the Society's Stations, and a statement of the Instruments which had been added during the past ten years. It was also resolved to give prominence in the Report to the ~~at the~~ General Meeting to the great importance of having Meteorology more generally taught in Schools.

A letter was read from Captain Hoffmeyer Director of the Meteorological Institute of Denmark, stating that he had established Stations in Denmark, Faro, Iceland, and Greenland, and asking permission to publish the Daily Observations which have been made ~~since~~

from 1868 to 1872 at Stykkisholm, & with Instruments belonging to this Society, & the Society's observer there, Mr Thorlacius.

The Council very cordially agreed to ~~Capt Hoff~~ ~~meyer's~~ this request, and asked the Chairman to write Capt. Hoffmeyer ~~that to~~ that effect, and to express at the same time how highly the Council appreciate the important service the Danish Meteorological Institute have rendered to ~~Meteoro~~ science in having established these Stations in Greenland, Iceland, Faro, and Denmark.

The Council authorised the insertion of the following Papers in the forthcoming Number of the Society's Journal, viz.—

1. Notes on West Indian Cyclones, by the Chairman.

2. Meteorological Conference at Leipsig 14th to 16th August 1872.

3. On the Specialties of the Weather of 1872 by the Meteorological Secretary.

4. Extract Letter from Dr Buys Ballot, Utrecht, by Robert Tennent, Esq.

5. Meteorological Register of Inveresk for 1872

6. Table of Observations connected with the Periodical Returns of the Seasons,

Mr Buchan stated that a complete set of compared Instruments had been procured for Fettes College, Edinburgh, and that the Observations were to be conducted under the immediate superintendence of James Blaikie, Esq., Mathematical Master of the College, and the Assistant. The Council agreed to sanction this as one of the regular Stations of the Society.

On the Motion of the Chairman, James

Fettes College, Edin-

Blaikie, Esq., Mathematical Master, was elected a Member of the Society.

Minutes of Meeting of Council held on 2nd July 1873, in 5 St Andrew Square,
Present Mr D. Milne Home in the chair,
" Sir J. B. Hepburn,
" Mr R. Tennent
" Alexander J. Adie,
" Dr Arthur Mitchell,
" Professor Balfour,
" Mr Buchan

Apologies for absence were received from Mr R. M. Smith, Mr W. T. ~~Lompson~~ Thomson, Mr T. Stevenson, and Dr Sanderson.

The Minutes of Meeting of 2nd June were read and found correct.

The Secretary ~~intimated~~ stated that he had at Mr Adie's request, visited ~~L~~ Rochsoille, Linlithgow to inspect the Rain Gauges there, which he found to be correct and in good order, ~~and that~~ he had also, as requested by the Council visit Greenock for the purpose of making arrangements for the resumption of the observations there which have been interrupted since the death of Mr Anderson. He called on Mr Wilson Manager of the Greenock Water works, who informed him that the Town had agreed to furnish the required Instruments, and make arrangements for carrying on the observations under his (Mr Wilson's) superintendence. The Observations would be begun immediately, except the

Thermometric Observations which would in all likelihood require to be delayed till a wall was built round the enclosure where the thermometers are to be kept. This would probably be done sometime in September or beginning of October.

Mr. Tennent intimated that he had visited the Society's Station at Stornoway and seen the Instruments and the Observer, and that he had also visited Lochmaddy and seen the Rain Gauge kept there by Sheriff Shaw.

The Secretary intimated that ~~the~~ Mr. Brodie, the Observer at Cairndow, had discontinued the observations there. The Council directed Mr. Buchan to make inquiries as to whether a successor could be obtained at Cairndow, or if not there, at Inveraray.

A letter was read from the Board of Trade stating that the Government ~~would~~ ~~[illegible]~~ approved of the nomination of Mr. Buchan as a Delegate to the Meteorological Congress to be held at Vienna in September next, but declined to defray any part of the expenses of sending the Delegates to the Conference.

The Council agreed that Mr. Buchan should go as a Delegate to the Congress, and appointed a Committee, consisting of Dr. Sanderson (Convener) Mr. Stevenson and Mr. R. M. Smith, to make the necessary arrangements for Mr. Buchan's going, — it being understood that the Funds to meet the expenses be obtained from private Subscriptions from the

Members of Council.

A ~~not~~ letter was read from Mr. Stevenson, stating that when ~~he was then~~ in London he had some conversation with Mr. Duncan McLaren M.P. ~~and~~ Dr. Lyon Playfair M.P. regarding the steps the Council should take with reference to what passed in the House of Commons regarding a Grant from Government to the Society. It was recommended that the Council write the Treasury a letter on the subject. The Council agreed to do this and remitted to Mr. Milne Home and Mr. Buchan to draft a letter and submit it, before being sent to the Treasury, to Dr. Lyon Playfair.

~~A~~ A draft Report from the Council to the General Meeting was read by the Chairman, which was approved of by the Council.

The Treasurer ~~also~~ submitted a Statement of the Society's accounts for the year 1872-73, audited by Mr. A. J. Adie, which was approved of.

On the motion of the Chairman, the following were elected Members of the Society:

Hugh Cleghorn, Esq of Stravithie, M.D. recommended by Professor Balfour

D. W. McGillivray, Eoligary, Barra, recommended by Mr. Tennent

Minutes of Meeting of Council held on 21st August 1873 in Society's Chambers.

Present, Mr. Alex J. Adie, and Mr. Buchan.

Apologies were received from Mr. D. Milne Home, Professor Balfour, Sir Thomas

B. Hepburn, Admiral Sir W. J. Hope Johnstone, Mr. Stevenson, Dr. Mitchell and Dr. Sanderson.

The Minutes of Meeting of 2nd July were read and found correct.

The Council authorized the insertion of the following Papers in the forthcoming Number of the Society's Journal, viz:—

1. Report of the General Meeting of the Society, held on 2d July 1873.

2 First Report from the Committee on the Marquis of Tweeddale's Proposal to investigate the relations of the Herring Fishery to Meteorology.

3 Results of an Inquiry into the Mean Inclination of Winds towards the Lower Isobarics, By W. Clement Ley.

4 Rainfall at Culloden during 32 years. By Arthur Forbes Esqr of Culloden.

5 Notes and correspondence

Mr. Buchan stated that a complete set of compared instruments had been ~~[illegible]~~ procured by Sir Patrick Keith Murray of Ochtertyre, Bart., and that seven months observations had been received from that place. The Council agreed to sanction Ochtertyre as one of the regular Stations of the Society.

Mr. Buchan reported his visits to the Society's Stations at Greenock, Edinburgh, Rockville, Inveresk, The Glen, Cupar, Teddinch Mains, St Andrews, Perth, Dundee and Carnwath, which were found to be in good order.

A letter was read from the Board

of Trade, intimating that Her Majesty's Government had nominated Mr. Buchan, the Society's Secretary, as one of the two Delegates to represent this country at the Meteorological Congress to be held at Vienna in September next.

A Letter from Her Majesty's Treasury, dated 4th August 1873, was read, but the consideration of this letter was delayed till next Meeting

~~On the~~ Charles E. Wilson, Esq. L.L.D. H.M. Inspector of Schools, 2 Kew Terrace, Glasgow, was elected a Member of the Society.

Minutes of Meeting of Council held on 3d December 1873, in the Society's Chambers

Present:—

Mr. Milne Home, chairman,
Dr Mitchell
Sir T. B. Hepburn,
Dr. Sanderson
Mr. A J. Adie,
" Thomas Stevenson
Sir William J. Hope Johnstone
Professor Balfour
Mr. R. M. Smith, and
" Buchan

Apology was received from Mr. Tennent and Mr. Cunningham.

The Minutes of Meeting of 21st August were read and found correct.

The Secretary stated that Mr. Gibb, the Society's Observer at Kettins since 1856 had intimated that he would no longer be able to continue to make regular observations for the Society. The Secretary was in-

structed to convey to Mr. Gibb the thanks of the Council for the valuable services he has rendered the Society, and to inquire if he could assist to obtain the services of anyone in the district who might be able and willing to make Observations for the Society.

Mr. Buchan stated that a complete set of compared Instruments had been procured by ~~the~~ George Hope Esq. of Bordlands, Peeblesshire, who had offered to make Observations for the Society, and that he had on the invitation of Mr. Hope visited that place. The Council agreed to accept this offer and thereupon sanctioned Bordlands, as being very eligible from its peculiar position, as one of the regular Stations of the Society.

eligible for its peculiar position

Offers to observe for the Society at Olrig, Caithness, and Fossoway, Kinross-shire, provided the Council would furnish the requisite Instruments were submitted. These offers the Council declined there being no Funds at their disposal for the purpose.

A Letter was read from Mr. Dix Weatherly, the Society's Observer at Manaos, intimating the arrival of the Instruments which had been forwarded to that place, and stating that he had paid £2"18 for carriage and that if the Society intends to pay this charge he should prefer to receive the value in works relating to Meteorology. The ~~Secretary was directed to~~ Council to comply with Mr. Weatherly's wishes in this matter, and directed the Secretary to procure such books as might be suitable and trans-

mit them to Mr. Weatherly.

A letter from the Treasury, dated in answer to the letter from the Marquis of Tweeddale dated 9th July with reference to a Grant from H.M. Government to the Society, was read. After some conversation it was agreed that a Deputation consisting of Mr. Milne Home, Mr. Stevenson and Dr. Sanderson wait on Mr. Duncan McLaren, M.P. with reference to this matter.

Dr. Mitchell on the part of the Ozone Committee reported that they had addressed a communication to the Council of the Royal Society of Edinburgh, requesting them to invite their Honorary Member Professor Andrews of Belfast to give an Address on the subject of Ozone at a Meeting of the Royal Society, and that a letter had been received from Professor Balfour, Secy. Roy. Soc. to the effect that the Council had communicated with Professor Andrews, and that he had kindly agreed to give an Address on the subject.

On the recommendation of the Committee the Council directed the Secretary to prepare a Report on the Ozone Observations which have been made by the Society's observers during the past 18 years.

The name of Sir Thomas Buchan Hepburn was added to the Committee.

On the part of the Herring Committee Mr. Stevenson reported that there had been several interviews with Mr. Bouverie Primrose, the results of which were

(1) The issuing by the Fishery Board,

of a circular to all the District Officers of the Board for the obtaining of more exact information regarding the Catch of Herrings and the Weather.

(2) The taking of Sea Temperatures and other Meteorological Observations, several times a day, on Board H. M. Cutter during the Herring Season.

(3) An offer to bring together for the use of the Committee the Books kept by the District Officers at the different Ports, containing the Entries regarding the Fishings for some years past.

The Committee regrets that the Self-Registering apparatus at Peterhead was broken last summer, but that Mr. Boyd had taken in charge the repair of it.

The Committee recommended that the District Officers Books be asked for, and that Mr. Buchan be instructed to continue the inquiry as regards the Catches of the past season, and the Catches at some other Stations in addition to those already examined.

The Council agreed to this, and the name of Mr. William Boyd, Peterhead was added to the Committee on the Herring Fishings.

~~A communication~~ Mr. Stevenson brought forward a proposal with the view of carrying out the ~~subject~~ suggestion made by him sometime ago that the Society should take steps for a more complete Observation of the phenomena of Storms over some limited ~~area~~ district, particularly as regards the state

of the Barometer and direction and force of the Wind, in order that a better knowledge of the relation of the Wind to the Barometric Gradient might be arrived at; and suggested the County of Edinburgh and adjoining districts as the most suitable for this purpose. A Committee consisting of Mr. Stevenson (Convener), Mr. George Hope, and Dr Sanderson were appointed to consider the subject and prepare a scheme for carrying out the proposal.

A letter from Mr. Macfie M.P. was read inquiring whether the Society had any information as to whether the larger Rainfall of the Pentlands was due to heavier showers, or to more frequent and prolonged showers.

Mr Buchan was directed to write Mr Macfie and suggest ~~whether~~ that he might ~~not, if convenient,~~ be present at the General Meeting of the Society, ~~which will be held~~ in the end of January, and there ask for this information, so that it might be suggested at the Meeting that Observers might undertake the inquiry with reference to their own observations.

Mr Buchan intimated that an application had been made to the Society with reference to the establishment of a system of Meteorological Observations by the Government of Japan. He then submitted a Memorandum on the subject which had been drawn up. This Memorandum the Council approved of, and directed that it be transmitted to Colin A McVean Esq.

The Council authorised the insertion of the ~~folling~~ following Papers in the forthcoming

Number of the Society's Journal; viz:—

1. On certain Effects of Currents on the Temperature of the Sea and the Air. By Professor Mohn, Christiania.

2. Letter on Certain Meteorological Questions requiring Investigation from Robert Tennent, Esq. [interlined: on [illegible] of Council]

3. On Atmospheric Ozone and its Sources. By T. Moffat Esq., M.D.

The Council directed the Secretary to re-write the Instructions which are printed on the back of the Society's Schedules, previous to the next impression being thrown off.

~~The~~ Mr. Buchan stated that he had attended the Meetings of the Meteorological Congress at Vienna in September last, as a Delegate of the British Government and that an account of the Proceedings of the Congress was in preparation and would soon be ready for publication.

The following gentlemen were on the motion of the Chairman ~~[illegible]~~ elected Members of the Society:—

R. H. Anderson Esq. Burleigh, Milnathort £0..10..0
Professor Blackie, Edinburgh — — —
Lachlan McKinnon, Esq., Duisdale
House, Skye, recd by R. Tennent, Esq 1..1..0
Colin A. McVean, Japan recd by
John J. Dalgleish, Esq of Ardnamurchan — — —

Minutes of Meeting of Council held on 31st Dec 1873, in Society's Chambers.

Present Mr. Milne Home, Chairman
Sir T. B. Hepburn

Mr. R. M. Smith,
Dr. Sanderson
Mr. R. Tennent,
Dr. A Mitchell,
Mr. W. T. Thomson
" T. Stevenson
Sir W. J. Hope Johnstone
Professor Balfour,
Mr. Buchan

Apology for absence was received from Mr. Hutcheson of Carlowrie.

The Minutes of Meeting of 3rd December were read and found correct.

Committee appointed ~~to consider~~ with reference to the The application for a Grant from Government ~~was then~~ stated that after careful consideration ~~the subject~~ they had judged it expedient that ~~they~~ the subject be again brought before the Council with the view of resolving on the line of action to be adopted in prosecuting the Society's claim for a Grant. After a lengthened conversation it was agreed (1) to memorialize the Treasury for a separate Grant; (2) to transmit copy of the Documents forwarded to the Treasury, to the Board of Trade, with an accompanying letter asking the assistance of the Board of Trade in ~~our~~ the application to the Treasury; and (3) to transmit copies of the Marquis of Tweeddale's letter to the Treasury, dated 9th July and the reply of the Treasury dated 4th August 1873 to the Meteorological Committee, for their information. A Committee, consisting of Mr. Milne Home Convener, Mr. Stevenson, Dr. Sanderson, and Dr. Mitchell, was appointed to draw up the Memorial and wait as

a Deputation on Mr D. McLaren with reference to the Grant.

It was agreed to hold the General Meeting on Thursday the 29th inst at 2 PM, and that the subjects to be brought before the Meeting be

1 Report from Council
2 Second Report from Herring Committee
3 Proposed Inquiry regarding Storms; By the Hon. Sec.
4 The Meteorological Congress at Vienna. By the Sec.

The following gentlemen were on the motion of the Chairman elected Members of the Society, viz

G. W. Balfour, Esq M.D. recomd by Mr Stevenson 10/6

W. B. Hunter, Esq. M.D. Smedley Hydropathic Matlock recomd by Mr Tennent 10/6

Minutes of Meeting of Council held on 26th January 1874 in Society's Chambers.

Present Mr Milne Home, Chairman
Dr. Sanderson
Mr R M Smith
Professor Balfour
Sir W. J. Hope Johnstone
Mr Stevenson and
Mr Buchan

Apologies for absence were received from Dr. A. Mitchell, Mr Tennent, Mr Adie, and Sir J. B. Hepburn.

The Minutes of Meeting of 31st Dec were read and found correct

It was agreed that the ~~two~~ Members ~~who~~ of Council who retire at this time be ~~Sir~~ Admiral Sir James Hope, Dr W.

Robertson, and Mr. Robert Hutcheson of Carlowrie; and that Professor Dickson, Glasgow University, Mr. George Hope of Bordlands, and Dr. James Robson-Scott be recommended to the Meeting for election as the new Members of Council.

A letter 20th inst was read from Mr. Scott, of the Meteorological Office, asking the Council to point out in what way they think that the organization of the Society could be brought into harmonious action with ~~their~~ the Meteorological Office, so as to contribute to the direct advancement of the Meteorology of the United Kingdom; and inviting the Council to send a Delegate to confer with the Committee on the subject.

After some conversation a letter was drafted in reply.

The following Gentlemen were on the motion of the Chairman elected Members of the Society:—

John Greig, Esq, Manager Coltness Iron Works rec^d by Mr. John McKay

George Gibson, Esq, 12 Greenhill Gardens rec^d by Dr. Nichol 10/6

Professor Dickson, Glasgow University 21/.

Minutes of Meeting of Council held on 29th January 1874 at 5 St Andrew Square.

Present Mr. Milne Home, Chairman

Mr. R. M. Smith,

Professor Balfour

Sir W. J. Hope Johnstone

Dr. Sanderson,

Mr. Stevenson and Mr Buchan

Apologies of absence were read from Mr. Tennent & Dr. A. Mitchell.

The Minutes of Meeting of 26th ult were read and found correct

A draft answer to Mr. Scott's letter of the 20th was submitted, and thereafter agreed to; ~~and~~ It was resolved that copy of the correspondence between the Council and the Meteorological Committee be sent to the Treasury and the Board of Trade.

The Report from the Council to the General Meeting was read, and ~~adopted~~ agreed to.

The following gentlemen were on the motion of the Chairman elected Members of the Society, viz

Kirkman Finlay. Esq of Glenlossit
Islay recd by Mr. R. Ballingall 21/-

C. O. F. ~~Cato~~ Cator, Esq Park ~~hill~~ side, Beckenham, Kent, recd by Mr. G. J. Symons 10/6

Minutes of Meeting of Council held on 9th Feby 1874 in Society's Chambers.

Present, Mr. Milne Home in the Chair
" R. Tennent,
" T. Stevenson,
Dr. Sanderson
" Robson-Scott,
Sir T. B. Hepburn,
Mr. R. M. Smith,
Professor Dickson,
Mr. Buchan

Apologies for absence were received from

Professor Crum Brown, Sir Wm. J. Hope Johnstone, Dr. Mitchell, and Mr. Cunningham, and Professor Balfour called immediately after the meeting was over, ~~and expressed~~.

The Minutes of Meeting of 29th January were read and found correct.

A letter from the Meteorological Committee, dated 3rd Feby. and a letter from the Board of Trade, dated 5th Feby. were read. It was agreed to send copies of the letter of the Meteorological Committee to the Treasury, and the Board of Trade, and in doing so to express a hope that the Lords Commissioners of H. M. Treasury may deem it right to adopt the alternative referred to by Mr. Baxter and recommend that a Grant of £500 be voted annually to the Society; and that the Board of Trade may be pleased to afford their sanction to the ~~present~~ application of the Council to the Treasury for a separate Grant.

A letter was read from Brigade-General Myer, Chief Signal Officer, United States, dated 27th January 1874, requesting the establishment of a regular Exchange between the Scottish Meteorological Society and the Office of the Chief Signal Officer at Washington, of uniform reports made from simultaneous observations taken daily at as many of the Society's Stations ~~under your charge~~ as it may be practicable ~~for~~ to have reports furnished from, or from other Stations from which observations may be voluntarily tendered, and of similar reports to be taken at the United States Stations. The Reports to embrace, at least, Pressure, Temperature, Humidity

Wind, Rain, and Clouds.

The Council agreed to accede to this request of the United States Government, and the Secretary was instructed to communicate with such of the Observers as would be likely to assist; and to write a letter ~~make an official application~~ to the Commissioners of the Northern Lighthouses inquiring if they would give their assistance the Council in this matter by granting permission to the Keepers of several of the Lighthouses to make the Observations for this International Scheme, ~~so far as they~~ many of the Lighthouses being in peculiarly favourable positions for the purpose.

Mr Stevenson brought forward a proposal regarding the extension by the Society of ~~Sea~~ Observations of Sea ~~the~~ Temperature ~~of the Sea~~ to greater depths and other seas. The Observations to be made by Maximum and Minimum Thermometers continuously submerged, instead of occasional submersions, ~~as heretofore~~ the apparatus being the same as that which was erected, on the suggestion of the Council in May last, by the Trustees of Peterhead Harbour, from a plan furnished by Mr Stevenson, and also ~~as~~ to that on ~~[illegible]~~ board the Challenger. Mr Stevenson proposed that the Council apply to Trinity House, London, ~~that they~~ requesting that they would authorize a similar kind of observation to be made at the following Lightships under their control, viz

Seven Stones	Bahama Bank,
Minquiers	Carnarvon Bay
N. Sand Hd,	Cardigan Bay;
Leman & Ower	

also to the Commissioners of Irish Lights, Dublin

for Observations from the following Lightships under their control, viz,

Salters,

Arklow,

Kish;

also to the Liverpool Dock Commissioners for observations from the North West Lightship under their control,

and to the Commissioners of Northern Lighthouses for Observations from the Pentland Skerries:

Mr. Stevenson further proposed that the Society would, if found necessary, defray the cost of the apparatus by private subscription or otherwise. The Council expressed their high approval of this proposal, not only from its important bearings on the Herring Fishery questions but also from its bearings on ~~many~~ other important practical and scientific inquiries, and directed the Secretary to make an application to the Boards cited above.

A letter from Professor Andrews, Belfast, was laid on the table, together with a copy, with Drawings, of the Address on Ozone which he delivered to the Members of the Royal Society on 22nd Dec. last on an invitation from the Council of that Body at the suggestion of the Ozone Committee. This Address Professor Andrews offered to the Council for publication in the Society's Journal. The Council agreed to publish this Address, and that for this purpose a double No. of the Journal appear next, ~~it being understood~~ and that the expense of the Woodcuts be defrayed out of the £100 Fund placed at the disposal of the Ozone Committee by the Marquis of Tweeddale.

Minute of Meeting of Council held on 5th March 1874 in Society's chambers.

Present Mr. D. Milne Home, Chairman
Mr. Thomas Stevenson,
" George Hope,
Professor Balfour
Dr. A. Mitchell,
" Robson Scott
Mr. R. Tennent and
" Buchan

Apology for absence was received from Mr. Thomson.

The Minutes of Meeting of 9th February 1874 were read and found correct.

The Secretary intimated that he had, as directed, applied to the Commissioners of Northern Lighthouses, of the Liverpool Dock ~~Commissioners~~ of Trinity House, and of the Irish Lights for observations of Maximum and Minimum Sea Temperatures according to the proposal made by Mr. Stevenson. In reply he had received a letter from the Secretary of the Irish Lights, dated 20 Feby stating that the Commissioners had requested the Board of Trade to sanction the Expenditure necessary to purchase three sets of Instruments in order to enable them to make the observations requested by the Society. A letter had also been received from the Secretary of the Liverpool Dock Commissioners, dated 18 Feby. enquiring regarding some of the details of the working out of the scheme.

The Secretary stated that Mr. R. M. Smith and himself had ~~pr~~ been at Restalrig Park, Leith, and that arrangements had been

made for resuming the Observations at these Stations, these having been interrupted since November last; and that Mr. Gebb the Observer had kindly agreed to make Observations also at 12·43 PM in connection with the International Meteorological Scheme which had been proposed by the United States.

A letter was read from Mr. Cunningham, Secretary to the Commissioners of Northern Lighthouses, dated 20th February, intimating that the Commissioners had agreed that Observations in connection with the International Meteorological Scheme be made for the Society at the 13 Lighthouses which had been specified. — The Secretary was directed to ~~thank~~ convey to the Commissioners the thanks of the Council for the assistance they had rendered the Council in this matter.

A Schedule which had been prepared for these Observations was submitted to the Council and approved of.

A letter was read from the Treasury dated 23rd February intimating that their Lordships cannot undertake to propose a separate vote for the Society. After some conversation it was agreed that the Council make no specific application to the Government in the meantime. The Chairman was requested to communicate the decision of the Treasury to Dr. Lyon Playfair, M.P. and Mr. McLaren, M.P. It was also agreed that the Marquis of Tweeddale be communicated with

Diagrams shewing the ~~comm~~ influence of Weather on the Mortality were exhibited and explained, and the further investigation of the subject was remitted to the Secretary and Dr. Mitchell, with the view of bringing the results before the Members of the Society, and of publication in the Journal.

On the motion of the Chairman, ~~Mr~~ Henry Schartan, Esq (10/6) Assistant Surveyor Eng. Ser. of Japan was, on the recommendation of Mr. Colin McVean, elected a Member of the Society. 10/6

Minute of Meeting of Council held on 23rd March 1874 in Society's Chambers.

Present Mr. Milne Home, Chairman,
Sir T. Buchan Hepburn,
Dr. A. Mitchell,
Mr. R. Tennent,
Dr. Robson Scott,
Mr. T. Stevenson,
Sir W. J. Hope Johnstone
Mr. R. M. Smith, and
Mr. Buchan

The Minutes of the Meeting of 5th March were read and found correct.

Apologies for absence were received from Professor Balfour and Mr. Hope.

A letter was read from Mr. Cunningham, Secy. to the Commissioners of Northern Lighthouses, dated 5th March 1874, intimating that the Commissioners agreed that observations on Maximum and Minimum Sea Temperatures, with Thermometers continuously immersed be made for the Society at the Pentland Skerries

by the Lighthouse Keeper there.

A letter was read from Dr R. E. Elliott, Deputy Surgeon General, dated 19th March 1874, intimating that the Director General no longer required to be furnished with a Monthly Copy of the Meteorological Observations made by the Society's Observers, and conveying the thanks of the Director General to the Council for ~~their~~ "rendering him assistance at a time of emergency".

A letter was read from the Registrar General for England, ~~dated~~ 19th March 1874 intimating that, in accordance with a request made by the Marquis of Tweeddale on behalf of the Society, he had forwarded Copies of his 10 last published Reports, and that future Reports would be presented to the Society as issued.

A communication was received from H. C. Russel, Esq. Director of the Observatory, Sydney, New South Wales, inquiring if any Barometer could be recommended likely to stand the risks of transport incurred in conveying the Instruments to the Inland Stations of the Colony. Mr Stevenson suggested that perhaps Barometers might be constructed with ~~tubes~~ iron tubes, ~~and it was remitted to him and Professor Crum Brown~~ The question of the practicability of constructing such Barometers was remitted to Mr Stevenson and Professor Crum Brown.

The Secretary intimated that he had visited the Societies Stations at Greenwich and Leith, in connection with the resumption of the observations at these places, and that the Instruments were at both Stations in good order and in good positions.

The question regarding an application to the

Government for a Grant was then considered, and a letter from the Marquis of Tweeddale was read in which his Lordship stated that it was ~~not~~ advisable not to make any further application to the Government now, but to delay doing so for sometime.

A letter was read from Mr. Cooper, Sheffield dated 21st March 1874, offering to forward to the Society a Copy of his Monthly Observations, stating at the same time that he forwarded his Observations to the Meteorological Office. After some conversation on the matter, the Council instructed the Secretary to write Mr. Cooper and thanking him for his courteous offer, but that in consideration of the agreement entered into between this Society and the Meteorological Office with the concurrence and approval of the Board of Trade with respect to the observers of the two Bodies, they regret that they do not see their way to accept his offer.

The following gentlemen were on the motion of the Chairman elected members of the Society:—

Colin Hay, Esq. Ardbeg House, Islay, rec.d by Mr. R. Ballingall 10/6

W. F. Cooper, Esq., Sheffield, 10/6.

Minute of Meeting of Council held on 14th April 1874 in Society's Chambers.

Present Mr. Milne Home, Chairman,
~~Dr. Robson~~ Dr. Robson Scott,
" Arthur Mitchell,
Professor Balfour
Mr. Stevenson.

Mr. Robt. Smith,
Sir W. J. Hope Johnstone, and
Mr. Buchan
Apologies for absence were received from Sir J. B. Hepburn, Mr. Tennent, Mr. Hope, and Dr. Sanderson.

The Minutes of Meeting of 23d March were read and found correct.

A letter was read from Dr. Buys Ballot, Utrecht, President of the Permanent Committee appointed by the Delegates of the Meteorological Congress at Vienna drawing the attention of the Council to the decisions of the Congress and requesting to be informed as to how far the Council were prepared to adopt these decisions, and with reference to any of the decisions to which the Council might not agree asking the Council to state the grounds of their dissent. After some conversation ~~the Council~~ on the matter, the Council remitted it to Mr. Stevenson and Mr. Buchan to answer this letter.

With reference to the subject of Sea Temperature Observations a letter was read from the Trinity House Brethren ~~declining~~ stating that as they are already in communication with the Meteorological Office in connection with the subject, they decline acceding to the request of the Council for observations from several of their Light-ships. A letter was read from the Commissioners of the Irish Lights intimating that the Board of Trade had declined to sanction the expense of the apparatus required at

the three Light Ships from which observations had been asked by the Council. A letter was also read from the ~~Commissioners~~ Liverpool Dock Commissioners intimating that they had agreed to provide the apparatus for the North West Floating Light.

The subject of a Grant from Government was then taken up and ~~considered~~ after a good deal of conversation on the subject it was agreed to apply ~~again~~ to the present Government, and that the application take the form of a letter from the ~~Present~~ President to Sir Stafford Northcote, Chancellor of the Exchequer. Dr. Mitchell was requested to prepare the letter of application in accordance with the views of the Council, ~~and to append thereto~~ Mr. Buchan was directed to write the Royal Scientific Commission, informing them that the Council has again applied to the Government for a Grant in aid and stating that it would be satisfactory to the Council to have an opportunity of supplementing the evidence already laid before the Royal Commissioners by Mr. Milne Home and Mr. Buchan, by additional evidence relating to the new work which the Society has recently undertaken.

Minute of Meeting of Council held on ~~4th~~ 3 June 1874 in Society's chambers.

Present Mr. D. Milne Home, Chairman,
Dr. Robson Scott,
Dr. Arthur Mitchell

Mr. Robert Tennent,
" Thomas Stevenson,
" A. J. Adie
Sir Thomas B. Hepburn, and Mr. Buchan
" W. J. Hope Johnstone

Apologies for absence were received from Professor Balfour, Mr. Hope, and Dr. Sanderson.

The Council authorized the insertion of the following Papers in the next No. of the Society's Journal:

1. Address on Ozone, by Prof. Andrews, Belfast.
2. Second Report from the Committee on the Marquis of Tweeddale's to investigate the Relations of the Herring Fishery to Meteorology
3. A New Form of Barometer. By T. Stevenson, Esq., C.E.
4. On Sea Temperature Observations. By T. Stevenson Esq., C.E.
5. On a Protecting Screen for a Rain Gauge. By the Secretary
6. The Distribution of Atmospheric Pressure in the Barometric Depressions which pass over North-Western Europe. By the Rev. Clement Ley.
7. Meteorological Register at Inveresk for 1873.
8. Table of Observations connected with the Periodical ~~Rep~~ Return of the Seasons.

A Letter was read from the Secretary of the Irish Lights Office, Dublin, intimating that they would not ask this Society to send the three Sets of Instruments for their Light ships as the Meteorological Committee, London, who had also been in communication with them, are to supply them with instruments.

Mr Stevenson exhibited the apparatus which had been made under his directions for the ~~Liverpool~~ observations of Sea temperature to be made by the Liverpool North-west Lightship

Dr Mitchell intimated that the Marquis of Tweeddale had liberally given £5 to the Ozone Committee to meet the expense incurred in furnishing Illustrations for Professor Andrews Paper and for 150 ~~extra~~ separate copies of the Paper to be placed at the disposal of the Committee. The Council requested the Hon. Secretary to convey to ~~the~~ His Lordship their cordial thanks ~~of the~~ for this additional instance of his Lordship's liberality.

The Council took up the question of the application for a Grant from Government, and in connection therewith two letters from Lord Walden to Dr. Sanderson were read — ~~After some conversation, the Council directed the Secretary to write Dr Sanderson, who was then in London, to the effect that the Council approve of the~~ The Council approve of this suggestion of his Lordship's suggestion that ~~such~~ the Society's application for a Grant be made a Scotch question and ~~to enlist~~ that influential men of both political parties ~~be enlisted~~ in the cause ~~and that the first Lord of the Treasury Mr Disraeli is the proper one to be asked~~ communicated with. As to the question whether the first Lord of the Treasury ~~Disraeli~~ should be approached privately or by deputation, the Council while expressing their preference for private ~~influence~~ communication desire to leave the decision of this point in Dr. Sanderson's own hands ~~according~~ after he has seen the Society's friends in London with reference to this matter.

~~It was agreed to hold the General Meeting of the Society on the 2nd July, and that the subjects to be brought before the Meeting be the following~~

1 ~~The influence~~

It was agreed to hold the General Meeting of the Society on the 2nd July and that the following Subjects to be brought before the following:—

following

1. The Influence of Weather on Mortality at different Ages. By Dr Arthur Mitchell and the Secretary.

2. On a New Anemometer. By Robert Ballingall Esq.

3. On a New Barometer. By T. Stevenson, Esq., C.E. Hon. Secretary.

The following Gentlemen were on the Motion of the Chairman unanimously elected Members of the Society:—

Dr Rutherford, Lunatic Asylum, Lochgilphead recommended by R. Ballingall Esq.

Dr McDowall, Northern County Asylum, Morpeth, recommended By Dr Mitchell.

Minute of Meeting of Council held on 2nd July 1874 at 117 George Street.

Present. The Marquis of Tweeddale, Preses.

" Mr D. Milne Home,
" Dr. Sanderson
" Mr. R. M. Smith,
" Dr. Arthur Mitchell,
" Professor Balfour,
" Mr. T. Stevenson,
" Mr. A. J. Adie,
" Mr. ~~Geo Hope~~ George Hope,
" Mr. Buchan

The Minutes of Meeting of 3rd June 1874 were read and found correct.

draft

A draft Report from the Council to the General Meeting was submitted by Mr.

D. Milne Home Chairman, and adopted by the Council.

A Report from the Ozone Committee was read by Dr. Mitchell, Convener of Committee, and adopted by the Council.

The President submitted to the Council a letter dated June 1874, which he had received from Mr. Scott, Secy. to the Maritime Conference Committee, appointed by the Vienna Meteorological Congress, inviting his Lordship, or a representative, to attend a private Maritime Conference to be held in London on 31st August next and three or four following days.

Minute of Meeting of Council held on 29th July 1874, in Society's Chambers.

Present, Mr. D. Milne Home, Chairman
" Sir Thomas B. Hepburn,
" Dr. Sanderson,
" Dr. A. Mitchell
" Mr. Alex J. Adie
" Mr. Thomas Stevenson
" Mr. Buchan,

Letters of apology of absence were received from Admiral J. W. Hope Johnstone, Professor Balfour, Mr. R. M. Smith, and Mr. Tennent.

The Minutes of ~~last~~ Meeting of 2nd July were read and found correct.

The Council agree to record in their Minutes an expression of deep regret at the recent death of Henry Stephens Esq, who ~~ever~~ ever since the institution of the Society had been a Member, and for many years one of the Council. No

one took a more lively interest in all the proceedings ~~affairs~~ of the Society than he did, and especially in the connections between Meteorology and Agriculture, with both of which subjects and particularly the latter, he was so deeply conversant.

~~Minute of Meeting of Council held on 29th July 1874~~

The Secretary submitted a large Diagram received from the Fishery Board which had been prepared by Mr George Thomson Fishery Officer at Lybster shewing the Fishing grounds and Fishings off the Caithness coast during the Fishing season of 1873. The Council regretted their inability from want of Funds, to publish this ~~valuable~~ Diagram in the Journal. They directed the Secretary to convey their cordial thanks to Mr Thomson for the great trouble he had taken in collecting so much valuable information and presenting it in the Diagram in so clear and interesting a manner.

A letter was read from Capt. McDonald dated 17 July of the Fishery Cutter stating that he had made Observations of Sea Temperature and Weather during the Fishing season off Lewis, and would resume the Observations on the east coast during the Fishing Season there. The Secretary was instructed to send Mr Thomson's Fishings Diagram to Capt. McDonald so that he might if so disposed shew it to any of the District

Fishery Officers he might happen to meet, and who might thereby be induced to construct similar Diagrams for their Districts.

The Secretary reported that the 20 Thermometers which had been presented by the Marquis of Tweeddale for the observation of sea temperature by fishermen in the different Fishing Districts on the east coast, were expected to be ready for delivery in a few days.

A letter to the Marquis of Tweeddale from Mr. Scott, Secy to the Maritime Conference Committee appointed by the Meteorological Congress at Vienna, inviting his Lordship, or a representative of the Society, to attend a Private ~~Meeting~~ Conference which the Committee had agreed to hold in London in the beginning of September. The Secretary was instructed to say that his Lordship is, owing to the state of his health, obliged to decline the invitation, and that with reference to a representative the Council are, owing to want of Funds, not in a position to send one; and further that in connection with this subject the Council will be happy to give any information in their power, and that they have instructed Mr. Stevenson and Mr. Buchan to forward to the Conference a letter conveying the known opinions of the Council regarding some of the subjects embraced by the Programme of the Conference.

The Secretary was instructed to write Mr. W. H. Bates, Secretary of the Royal Geographical

Society proposing an Exchange of Publications between the two Bodies.

The Secretary ~~gave~~ made a Report on the Society's Stations at Balloch Castle, Cameron House, and Auchendennan which he had visited

On the motion of the Chairman, James Denholm, Esq 1 London Street was elected a Member of the Society.

It was suggested that the Secretary keep in view the preparation of a Paper on the observations connected with the Return of the Seasons.

Minute of Meeting of Council held on 15 ~~December~~ January 1875 in Society's Chambers.

Present Mr. D. Milne Home, Chairman,
Dr. Arthur Mitchell
Mr. R. M. Smith
Professor Balfour
Sir William Hope Johnstone
Dr. Robson Scott, and
Mr. Buchan

Apologies for absence were received from Sir T. B. Hepburn. Bart, Mr. Stevenson, Mr. R. Tennent, Mr. George Hope, and Mr. A. D. Adie.

The Minutes of Meeting of Council on 29th July 1874 were read and found correct.

The Secretary stated that the Sea Thermometers, which ~~had been~~ were presented to the Society by the Marquis of Tweeddale, had been distributed by the Fishery Board in the different Fishery Districts of the east of Scotland during the Herring Season, and Observations had been

made with them by the fishermen. These Thermometers had been returned to the Office for the purpose of being compared with the Society's Standard, there having been no time to do this ~~before~~ fully, before being ~~despatc~~ despatched.

Observations of Sea Temperature Weather &c. made in the Fishery Cutter "Vigilant" ~~of Capt. Mc~~ during the Fishing Season of 1874 on both the east and west coasts of Scotland, similar to those made in 1873 had been received by the Society, and also a large Chart constructed by Mr. Thomson Fishery Officer at Lybster, shewing the Fishing grounds, and Fishing off the Caithness coast during 1874.

Thanks to Mr. Thomson

Application had been made by Sir W. M. Cunninghame on behalf of the Commission appointed to inquire into the Herring Fishery of Loch Fyne for Extracts from the Society's records of observations made in or near the district during the past twenty years. The information had been supplied.

Application had been made by ~~Dr~~ Professor Karsten, Kiel, on behalf of the Ministerial-Commission of Inquiry into physical peculiarities of the German Ocean, and Baltic Sea, and the Fisheries, for an Exchange of Publications, — the Commission being desirous to obtain along with other information the Society's Observations on the Temperature of the Sea. The Council agreed to the proposed Exchange.

The Council agreed to sanction Rosewell Asylum, ~~or~~ Roslin, as one of the Society's

Stations. A very complete set of Instruments for this Station verified by the Secretary, having been procured by the Managers of the Asylum, and placed in suitable positions under the direction of the Secretary.

The Secretary reported that he had inspected the Society's Stations at Smeaton, Seacliffe, Annanhill, Girvan, Paisley, and Rosewell, and that the Instruments were in good order. Mr. Anderson the Observer at Girvan being unable to continue the Observations, inquiries are being made by for a suitable successor.

It was agreed that the General Meeting be held either on the first or second Wednesday of February at one O'clock. The business to be

1. Report from Council to General Meeting.
2. ~~R~~ On the Effects of the Weather of November, December and January last, on the Death-rate.
3. Third Report on the relation of Meteorology to the Herring Fishery.
4. Bearing of Meteorological Records on supposed Change of Climate in Scotland.

It was suggested that the Three names at the top of the List of Council be proposed ~~for re-election~~, to the General Meeting, for re-election.

Dr. Mitchell, after referring to the importance of the question of the Influence of Weather on Mortality at Different Ages, with which he and the Secretary had been for some months engaged, stated that it was very desirable that the whole of the Discussion should be published in the Society's Journal at once, and that about sixty explanatory Wood-cuts

would be required in illustration of the more prominent Diseases. He suggested whether Four No. of the Journal might not be published together. ~~The~~

The Council agreed to publish Four No. together; and they also agreed to accept an offer made by Mr. William Ballingall, Woodengraver, to furnish not fewer than 50 Woodcuts of the smaller size required, at the rate of Three Shillings each, and Woodcuts of the larger size at Twelve Shillings & 6d each, it being understood that the Four No. with the Illustrations shall not ~~exceed the expense~~ cost the Council more than the price of Four Ordinary No.

The following were on the motion of the Chairman elected members of the Society—

Miss Anstruther, Old Ballinkinrain		10/6
Thomas Anderson, Esq. M.D. Roswell Asylum		10/6
William Robson, Esq. SSC,		21/-
W. Campbell, Esq. M.D.	London	21/-

Minute of Meeting of Council held on 8th February 1875, in Society's Chambers

Present Mr. D. Milne Home, Chairman
Dr. Sanderson,
Dr. Robson Scott
Professor Balfour
Mr. R. M. Smith
Mr. R. Tennent
Mr. G. Hope, and
Mr. Buchan

The Minutes of Meeting of 15th January

were read and found correct.

Apologies for absence were received from Mr A. J. Adie, Dr. A. Mitchell and Mr T. Stevenson.

A letter was read from Mr Scott, dated 19th January 1875, with reference to obtaining, for the Meteorological Committee of the Royal Society, copies of observations made at some of the Society's Stations to be furnished monthly. After some conversation, the consideration of this matter was deferred to a future Meeting of Council.

The Chairman read draft report from the Council to next General Meeting.

A letter was read from Mr W. T. Thomson, intimating that, ~~since owing to the state of his health he would require to spend the several winters abroad, he could not attend the Meetings of Council~~ his wish to withdraw from the Council, owing to the State of his health.

It was agreed that Sir W. J. Hope Johnstone and Mr R. M. Smith be proposed to the General Meeting for re-election, and that Dr Matthews Duncan ~~or Mr Dudgeon of Cargen~~ be proposed as New Member of Council

On the motion of the Chairman the Rev J. A. Legh Campbell Helpston, ~~Esq~~ was elected Member of the Society 10/6

Minutes of Meeting of Council held on 10th February 1875 at No 5 St Andrew Square.

Present Mr D Milne Home, Chairman.
Dr. Mitchell

Mr. T. Stevenson,
" George Hope
" A. J. Adie
Dr Sanderson
Mr. R. M. Smith
Dr. Robson Scott, and
Mr. Buchan.

Apologies for absence were received from Professor Balfour, Mr. Tennent, and Sir T. B. Hepburn.

The Minutes of Meeting of 8th inst were read and found correct.

The Report from the Council to the General Meeting was adjusted, and it was agreed to hold a Meeting of Council next week for the consideration of the letter received from Mr Scott of the Meteorological Committee, dated 19th January 1875

Minute of Meeting of Council held on 10th February 1875 in Society's Chambers.

Present Mr. D. Milne Home, Chairman
~~Mr~~ Sir Thos. B. Hepburn,
Dr. Sanderson
Dr. Robson Scott
Mr. R. M. Smith
Mr. T. Stevenson
Mr. R. Tennent
Dr. Mitchell,
Professor Balfour, and
Mr. Buchan

The Minutes of Meeting of 10th inst were read and found correct.

A letter was read from Dr. George Neumayer Hydrographer to the Admiralty, Berlin, intimating

the establishment, in the beginning of this year at Hamburg, of a Government Institution for Maritime Meteorology and Weather Telegraphy for the benefit of the German Coasts to be called the Deutsche ~~See~~ Seewarte, and proposing to the Society an Exchange of Publications and regular Intercourse between the two Bodies. The Council agreed to this proposal and directed the Secretary to write Dr. Neumayer to that effect.

A letter was read from Mr Scott, Meteorological Office, dated 19th January 1875, stating that the Committee are desirous to learn whether or not the Council of the Scottish Meteorological Society are disposed to enter into an arrangement by which the Meteorological Office will receive for publication returns of various kinds from certain Stations organized by the Society. A letter in reply thereto was drafted, which the Honorary Secretary was requested to forward.

Letter dated 10 February 1875

A conversation then took place with reference to the Grant from Government, ~~after which~~ and it was resolved to hold another Meeting of Council at an early date in connection therewith. In the mean the Chairman and Dr. Sanderson were requested to make inquiries on the subject.

Mr. R. M. Smith stated what he had done with the view of inducing several Insurance Companies, to become Contributors to the Society. The Council highly approved of the proposal, and resolved to takes steps to carry it out as soon as the Paper on

the Influence of Weather on ~~Health~~ the Mortality is ~~was~~ printed.

On the motion of the Chairman, J. Henry Lee, Esq, Redbrook House, ~~Leith~~ Selby, recommended by Mr R. Tennent, was elected a Member of the Society.

Minute of Meeting of Council held on 8 March 1875 in Society's Chambers.

Present Mr Milne Home, Chairman,
" Dr. A. Mitchell
" Mr. R. M. Smith,
" ~~Mr~~ W. J Hope Johnstone
" Professor Balfour
" ~~R~~ Mr. R. Tennent,
" Sir Thos. B. Hepburn,
" Mr. T. Stevenson
" Dr. Sanderson
" Dr. Mitchell, and
Mr. Buchan

Apologies for absence were received from Dr. Robson Scott and Mr Adie

The Minutes of Meeting of 10th February were read and found correct.

A donation of the Yearly Results of Meteorological Observations made at the Radcliffe Observatory, Oxford, from the Rev. R. Main, Radcliffe Observer, was laid on the Table, for which the Secretary was directed to return the cordial thanks of the Council. The Secretary was also instructed to forward to Mr. Main, in exchange, a copy of the Society's Journal, so far as in print.

A Letter was read from Dr Buys

Ballot, Utrecht, asking for the daily Observations from the Stations formerly supplied to him, for the years 1871-72-73, and for copies of the Monthly Resumés for 1874 and 1875, and expressing a hope that the Council would print the daily Observations from a selection of their Stations. The Secretary was directed to supply the Observations, asked for, as has heretofore been done.

A letter was read from Mr. Scott, dated 23rd February, thanking the Council for permission granted to the Meteorological Committee, to republish the Returns from a selected number of the Society's Stations, and expressing a desire on the part of the Committee to enter into an arrangement with the Society similar to that entered into ~~with~~ between the English Meteorological Society and the Committee.

Letter dated 9th March 1875

A letter was drafted in answer thereto which the Honorary Secretary was requested to forward.

Letters were read by the Chairman and Dr. Sanderson with reference to the Society's application for a Grant, and after some conversation on the subject, the Secretary was directed to prepare a Statement of the Society's claims ~~Memorial~~, in accordance with the views expressed. He was directed to send Proofs of the Statement to ~~the~~ Members of Council, after which it was agreed to call a Meeting of the Council for the consideration of this matter.

The following were on the motion of the Chairman elected Members of the Society,—

Dr. R. M. Ferguson, 12 Moray Pl. 10/6
Sir W. M. Cunninghame, Bart
Glenmore House, Maybole M.P.

The Chairman stated that he had had some conversation with the Hon. Mr B. Primrose regarding the printing of the Chart of ^Herring^ Fishings ~~&~~ and Weather of the ~~Ca~~ Caithness coast during July–Sept 1874, which had been prepared ~~by~~ for the Society, by Mr. Thomson, District Fishery Officer at Lybster, and that ~~it~~ the Fishery Board would be prepared to print the Chart provided ~~that~~ a Copy of it was prepared in copying ink so the cost of the whole would not exceed £5..0..0. The Council agreed that Mr. Buchan prepare the Chart for the printer

Minute of Meeting of Council held in 19th March 1875 in Society's chambers.

Present Mr. D. Milne Home, Chairman
.. G. Hope
.. T. Stevenson,
Dr. Sanderson,
Prof Balfour
Mr. R. M. Smith
Sir W. J. Hope Johnstone
Dr. Robson Scott.
Mr. Tennent, and
Mr. Buchan

Apologies for absence was received for Dr. Mitchell and Mr. Adie

The Minutes of Meeting of 8th inst. were read and found correct.

A Donation of the Works of Sir Ed. Sabine, presented by Sir Charles Wheatson, was laid on the table, ~~and~~ The Secretary was instructed to convey to Sir Charles, the best thanks of the Council for this valuable present.

The Statement of the Society's claim ~~for~~ a Grant from Government, which had been previously circulated among ~~the~~ Members of Council in proof, was taken into consideration and ~~finally~~ adjusted. The Secretary was directed to have a fresh Proof of the Statement forwarded to the Marquis of Tweeddale for his Lordship's consideration and approval, and thereafter to have it printed and circulated.

The Secretary exhibited 13 charts shewing the Distribution of the Diurnal Barometric Pressure over the Globe, being Part I of the Inquiry, — and after referring to the importance of the Discussion and its laborious nature, suggested whether application might not be made to the Council of the Royal Society of Edinburgh for a money Grant to meet the expenses of the computations required. The Council approved of the proposal and suggested in the mean time that the Secretary make certain inquiries with reference to this matter.

Minute of Meeting of Council on 1st April in Society's Chambers

Present, Mr. D. Milne Home, Chairman

Dr. J. Sanderson
" A. Mitchell
" Robson Scott,
Mr. R. M. Smith
" T. Stevenson
Sir W. J. Hope Johnstone
Sir T. B. Hepburn

Apologies for absence were received from Mr. Tennent and Professor Balfour.

The Secretary drew attention to a printed paper which had been received from Dr. H. Hildebrandsson of Upsal, giving a discussion of the Upper Currents of the atmosphere in connection with ~~Barometric disturbances~~ regions of high and low Barometer, based on Observations of the cirrus cloud.

A letter was read from Mr. Scott, dated 23rd March 1875, with reference to the arrangement proposed by the Meteorological Committee for the publication of Returns from certain of the Society's Stations. The matter was very fully considered and Dr. Mitchell was requested to ~~draw up an answer in~~ prepare an answer to the letter in accordance with the views of the Council.

It was agreed that copies of the Society's Memorial together with a letter from the Chairman of the Council be sent to all Scotch Members of Parliament, and others likely to forward the Society's claim, and to a selection of the Scotch newspapers.

On the motion of the Chairman the Rev. N. Percy Robinson, D.D., Trinity College, Glenalmond, was elected a Member of the Society.

Minute of Meeting of Council held in the Society's Chambers on 29th April 1875.

Present Mr. D. Milne Home, Chairman
" Mr. T. Stevenson
" " R. Tennent
" Sir J. B. Hepburn
" Professor Balfour,
" Dr. A. Mitchell,

Apologies for absence were received from Dr. Robson Scott, and Dr. Sanderson.

The Minutes of Meeting of 1st April were read and found correct.

The Secretary read a letter from the Honble F. B. Primrose of the Fishery Board, intimating that the Board had agreed to print 100 copies of the Herring and Weather chart which had been prepared by Mr. Thomson, Fishery Officer, Lybster, — it being understood that the copy for the printer be prepared by the Society's Secretary.

A letter was read from Mr. Scott of the Meteorological Office, dated 23 March 1875, with reference to the application on the part of the Met. Com. for Observations from some of the Society's Stations. After some conversation a draft answer to this letter was agreed to.

Sent 30th April

On the motion of the Chairman the following gentlemen were elected Members of the Society

Capt. Wm Elliott Lockhart, yr. of Borthwickbrae &c recommended by Dr. Sanderson 21/.

James B. Russell, Esq MD, Medical Officer of Health, Glasgow 21/.

Minute of Meeting of Council held in the Society's Chambers on 24 June 1875.

Present Mr. D. Milne Home, Chairman
Mr A. J. Adie
" R. M. Smith
Dr A. Mitchell,
Professor Balfour, and
Mr. Buchan

Apologies for absence were received from Dr. Sanderson, Sir T. B. Hepburn, and Mr. T. Stevenson.

The Minutes of Meeting of 29th April were read and found correct.

Two letters were read from Mr. Scott, Meteorological Office, London, dated May 31st, with reference to the application on the part of the Committee for Observations from some of the Society's Stations. It was agreed that the answer to these letters be in the meantime deferred.

A circular letter from the Permanent Committee of the Vienna Congress was read and it was also agreed to defer in the mean time an answer thereto.

It was agreed to hold the General Meeting of the Society on Tuesday the 13th July at 2 P.M. and that the subjects to be brought before the Meeting be,

1 The Mortality of the Large Towns of the British Islands in relation to Weather, By the Secretary

2. Weather and Epidemics of Scarlet Fever in London during the past 35 Years, By Dr. Arthur Mitchell.

3. On Sea Temperatures on the

British Coasts, as ascertained by Thermometers continuously immersed. By Thomas Stevenson Esq C.E.

4 Letter from Alex J. Adie, Esq C.E. on Underground Temperature in spring as affecting after-crops.

The following gentlemen were on the motion of the chairman elected Members of the Society:—

James Stewart, Esq Sanitary Engineer Glasgow 10/6

John Davie, Esq, The Waverley Hydropathic Melrose, recommended by Dr. Nachot 10/6

Minute of Meeting of Council held on 13 July 1875 in 117 George Street.

Present Mr. D. Milne Home, Chairman
Sir T. B. Hepburn,
Sir W. J. Hope Johnstone
Mr. George Hope
Dr. Sanderson
Mr. T. Stevenson
" R. Tennent
" R. M. Smith
Dr. Robson Scott, and
Mr. Buchan

Apologies for absence were received from Dr Mitchell, and Mr A. J. Adie.

The minutes of Meeting of 24th June were read and found correct.

A draft Report from the Council to the General Meeting was submitted by the Chairman, and approved of.

The General Meeting was thereafter held

Minute of Meeting of Council held in the Society's chambers on 6th August 1875.

Present Mr. D. Milne Home, Chairman
Sir T. B. Hepburn,
Dr. Mitchell,
Mr. Adie, and
Mr. Buchan

Apologies for absence were received from Professor Balfour, Mr. T. Stevenson, and Dr. Sanderson.

The Minutes of Meeting of 13th July were read and found correct.

With reference to the Society's application to the Government for a Grant, the Chairman read letters which he had received from Mr. D. McLaren, M.P. and Captain D. Milne Home, M.P. and Mr. McLagan M.P. It was agreed that the Chairman write the Chancellor of the Exchequer with reference to Mr. D. McLaren's proposal that the Government ~~give the Society~~ make the Society a Grant this year of the £400 saved on the professorship of Education, pending the inquiry into the Grant for Meteorological Purposes by a Commission of the Treasury.

It was agreed that a Station be sanctioned at Melrose, Mr. John Davie, The Waverly, Melrose, having agreed to procure the necessary instruments and make the observations.

The following gentlemen were on the motion of the Chairman elected Members:—

Dr. J. Grigor, Nairn	21/-
Dr. W. Norris Mackay	10/6
Dr. Wm. Cumming, Ainslie Pl.	10/6
Dr. John Beddoe, Clifton.	10/6

all of them being recommended by Dr. Mitchell

Minute of Meeting of Council held in Society's Chambers on 15 Nov. 1875.

Present, - Mr D. Milne Home, Chairman,
Sir T. B. Hepburn,
Mr R. M. Smith
Dr Robson Scott,
Professor Balfour,
Mr T. Stevenson
" E. Hope
" R. Tennent
Sir W. J. Hope Johnstone, and
Mr Buchan.

Apology for absence was received from Dr Mitchell.

The Minutes of Meeting of 6th August were read and found correct.

Mr Stevenson read a letter which he had received from Mr Archibald Young, Secretary to the Commissioners of Scottish Salmon Fisheries with reference to a proposed inquiry into the ~~cause or~~ causes, of the earliness or lateness of Salmon Rivers; - the proposal being to institute regular observations on the temperature of the Rivers by means of Thermometers (Max. and Min) continuously immersed and on the height of the water, and similar observations ~~of~~ on the Temperature of the sea adjoining. It was stated that Mr William Boyd, a Member of the Herring Committee, was prepared ~~to~~ to make observations on the Temperature of the Ugie in connection with those made by him at Peterhead ~~Ha~~ Harbour.

The Council agreed to purchase a Max and Min Thermometer for the Ugie

Observations, and the Hon. Secretary was requested to communicate with Mr Peacock, Commissioner to the Duke of Sutherland, and with Mr Balmer Commissioner to the Duke Richmond and with the Secretary of the English Commissioners with the view of extending the inquiry into the early and late Rivers in different parts of Great Britain.

Mr Buchan stated that he had had some communication with Mr G.L. Paulin, Berwick, regarding the Catches of Salmon, Grilse, and Trout in the Tweed, and that he expected to receive from him in a few days Returns of the daily Catches for the past 5 years, together with the Height of the River, its temperature daily at 9 AM. and the Weather.

The Council agreed that the following Papers appear in next No of the Society's Journal which completes Vol IX of New Series in so far as there may be space for them:—

1. Report of on Ozone Observations
2. Observations connected with the Return of the Seasons, made at Roy. Bot. Gardens. Edinburgh.
3. Bearing of Meteorological Records on supposed change of Scottish Climate.
4. The Connection between the Relative Steepness of Gradients in a Depression, and the Course of the Depression. By the Rev. W. Clement Ley.
5. Atmospheric Refraction. By T. Stevenson Esq, C.E.
6. Cloud Reflecting Compasses. By T. Stevenson, Esq. C.E.
7. Cloud Formation, By T. Stevenson, Esq. C.E.

The Secretary reported that he had visited the Society's Stations at Eyemouth, Marchmont, Milne

Gardener and had found the Instruments in good order, except the Barometer at Marchmont which had gone out of order in removing it some months before: this was put right.

The Secretary intimated the death of ~~that~~ the observers at Burntisland and Balfour, and that Mr Millar was to cease observing at Rookston at the end of the present year owing to failing health. He was directed to write Admiral Bethune of Balfour, ~~and under~~ with a view to arrange regarding the ~~re~~ resumption of the observations by the new Gardener to be appointed there.

The Council agreed to sanction Rothesay and Haddington as regular Stations of the Society; the Archaeological and Physical ~~Natural History~~ Society of Bute ~~at Rothesay~~ Rothsay and the Directors of the Lunatic Asylum at Haddington having agreed to procure the Necessary Instruments.

The following gentlemen were on the motion of the Chairman elected Members of the Society:—

Life Member:—

J. W. Malcolm Esq, Yr of Poltalloch, M.P. £10-10.0
Recommended by Dr A. Mitchell

Dr W. C. McIntosh, Murthly
Recd by Dr A Mitchell

Thomas Greer, Esq. of Seapark, Belfast
Robert Edward Ward Esq of Bangor Castle, Belfast
} Recd by Sir N. Staples, Bart.

Samuel Lawson Booth Esq. Southport
William Stewart Fraser, Esq. W.S., 42 Melville Str.
F. M. Allan, 79 St. George Pl. Glasgow.
James A. Dewar Esq. M.D. ~~San Remo~~ Arbroath.
Dr Steven, San Remo.
Sergt. Inst. Alexander Fraser, Roy Bridge Inverness
W. J. Black, Esq. Surgeon-Major
2 George Sq —

Minute of Meeting of Council held in Society's Chambers on 21st January 1876

Present,– Mr. D. Milne Home, Chairman
Dr. Sanderson
Mr R. M. Smith,
Dr. Robson Scott
Mr. T. Stevenson
Professor Balfour
Mr. Alex J. Adie, and
Mr. Buchan

Apologies for absence were received from Sir T. B. Hepburn, and Sir W. J. H. Johnstone.

The Minutes of Meeting of 15 November were read and found correct.

Mr. Stevenson stated that the Duke of Richmond and Gordon had consented to establish Stations on the Spey and Sea coast adjoining in connection with the inquiry into the earliness of lateness of Salmon Rivers. Mr. Stevenson was requested to write Mr. Balmer, His Grace's Commissioner, for regarding suitable Stations for the continuously immersed thermometers.

It was intimated that Mr. Archibald Young, Mr. Peacock, Commissioner to the Duke of Sutherland, and Mr. Frank Buckland have also been communicated with regarding the establishment of other Stations for the same purpose in other parts of Scotland and the north of England.

It was agreed to hold the General Meeting of the Society towards the end of February, the day of Meeting being left to be fixed by the Chairman and Secretary, and that the subjects to be brought before the Meeting be the following:—

1 Report from the Council
2 Report from the Ozone Committee
3 The Salmon, Grilse, and Trout Fishings of the Tweed, in relation to Meteorology.
4 Report from the Herring Committee.

The Secretary reported that he had visited Haddington for the purpose of establishing the new Station there at the District Lunatic Asylum, and that with the ~~assistance~~ co-operation of Dr. Howden, everything had been arranged ~~in a very~~ satisfactory manner. The Rain Gauge at Mr Dods Nurseries was also inspected and found to be in a satisfactory condition and the observations carefully made.

The Council had its attention drawn to the evidence of Mr R. H. Scott Director of the Board of Trade Meteorological Committee, given by him on the 22 April 1874 before the Royal Commission on Scientific Instruction. On this occasion Mr Scott having been asked as a Witness whether any correspondence had taken place "between him and the Scottish Meteorological Society stated that much correspondence had taken place that part of this correspondence had been in a printed form, laid by the Scottish Society before the Government when asking for grants in aid of the Society, but that in this printed correspondence one letter had been suppressed by the Society, dated 9th May, 1870, which Mr Scott states to have been a private letter to himself by Dr Keith Johnstone of Edinburgh, and the terms of which letter Mr Scott gives in his evidence.

With reference to this charge against the Scottish Society of suppressing the letter so given

by Mr Scott, the Council have to state that they knew nothing of the letter in question until they saw it, within these last few days, in Mr Scott's evidence; and as this evidence has been laid before the Commissioners for enquiring into the administration of the Parliamentary Grant of £10000 for Meteorological purposes one of whom is Mr Milne Home, the Chairman of the Council of the Scottish Society, the Council authorize Mr Milne Home to state to the other Commissioners, that this charge by Mr Scott against the Scottish Society of suppressing the letter in question is unfounded ~~and unjustifiable~~ at which they feel exceedingly aggrieved.

The following gentlemen were on the motion of the Chairman elected Members of the Society.

Dr Cheine, recommended by Mr Stevenson C.E. £1-1-0
Mr Blackwood £1-1-0
Mr W. C. Pennett 1-0-0
recommended by G. J. Symons.
" William Scott, Bellaston
Dr J. L. Roberts, Denbigh
Rev. W. B. Busby, Dalkeith

Minute of Meeting of Council held in Society's chambers on 2d March 1876,

Present Mr. D. Milne Home Chairman
Sir W. J. Hope Johnstone
Dr. Sanderson
Dr. A. Mitchell
Mr. A. J. Adie
Dr. Robson Scott
Mr. R. M. Smith
Mr. George Hope
Professor Balfour,
Mr. Tennent,
Mr. Stevenson and Mr. Buchan

Apology for absence was received from Sir T. B. Hepburn.

The Minutes of Meeting of 21st January were read and found correct.

A draft Report from the Council to the General Meeting was read and adjusted.

A Letter was read from Mr Lockyer Secretary ~~of the~~ South Kensington Exhibition of Scientific Instruments, inviting the Society to send Instruments and specimens of its work to the Exhibition. The Council agreed to send (1) Instruments designed or introduced by the Society in the prosecution of its objects; (2) Instruments which may have some historical interest; and (3) Specimens of the more important work done by the Society.

On the Motion of the Chairman the following ~~gentlemen~~ were elected Members of the Society,

Jane Notter Esq., M.D. Chatham
Leicester Literary & Philosophical Society

Minute of Meeting of Council held in Society's Chambers on 20th March 1876.

Present Mr D. Milne Home,
Dr. J. Cleghorn
Sir T. B. Hepburn,
Dr. Sanderson,
Mr R. Tennent,
Mr R. M. Smith
Mr Stevenson,
Sir W. J. Hope Johnstone
Dr A Mitchell,
Professor Balfour and Mr Buchan

The Minutes of Meeting of 2 March 1876 were read and found correct.

A letter was read from Dr. Matthews Duncan suggesting an inquiry into the relations of groundwater to Diseases. The letter was remitted to Dr. Mitchell, as Chairman of Medico-Climatological Committee.

It was agreed to sanction Roy Bridge as one of the regular Stations of the Society, all the Instruments being supplied by Sergt Instructor Fraser, with the exception of a Barometer which the ~~Committee~~ Council agreed to furnish.

With reference to applications to observe made by the Rev. Alex. W. Milne, Canonbie; Mr. Walter Owens, Tor House near Castle Douglas; and Dr. Roberts Thomson, Bournmouth, the Secretary was directed to make inquiries regarding Instruments.

The Chairman read extract of a Minute of the Meteorological Committee which had been transmitted to him at the request of Mr. Galton regarding the Letter of Dr. Johnston's dated 9th May 1870, stated by Mr. Scott's in his evidence before the Duke of Devonshire's Committee to have been suppressed by the Council. After ~~some~~ a lengthened conversation it was resolved that the Chairman write Mr. Scott requesting him to send to him (Mr. Milne Home) the original letter for which the Meteorological Committee appear to hold the Council responsible.

The Chairman read a correspondence which he had had with Sir William Stirling Maxwell, Chairman of the Treasury

Meteorological Commission, with reference to ~~regarding~~ the Council giving an opinion regarding the Observatories established by the Meteorological Committee of the Royal Society. The Council having considered this matter, beg respectfully to decline expressing any opinion regarding the operations of another Body. All that the Council feel entitled to bring under the notice of the Commission is a statement of their own claims for Government aid in carrying out the objects of the Society.

Buchan to London

In reply to Sir W. Stirling Maxwell, the Council requested their chairman to suggest the names of Mr Buchan, Mr Stevenson, and Dr. Mitchell to Sir William to represent the Society before the Meteorological Commission.

On the motion of the chairman the following were elected Members of the Society:

John Addie, Esq, Uddingston Life £10"10"0
Thomas Robertson, Esq 18 Windsor St.
Edinburgh rec.d by Mr R M. Smith 1"1"0
George Stevens, Esq Gallane, rec.d
by Mr W.S. McDonald

Minute of Meeting of Council held in Society's Chambers on 31 March 1876.

Present Mr. Milne Home, Chairman
Dr. Mitchell
Dr. Sanderson
Mr. R. M. Smith
Sir W. J. Hope Johnstone
Professor Balfour and Mr. Buchan

Letters of apology were received from Mr. Tennent, Sir T. B. Hepburn, Dr. Robson Scott, and Mr. Stevenson.

The Minutes of Meeting of 20 March were read and found correct.

The Chairman read a letter which he had received from Mr. Galton intimating a refusal on the part of the Meteorological Committee to send to the Council ~~for their perusal~~ Dr. Keith Johnston's letter dated 9th May 1870 which ~~was~~ has been stated by Mr. Scott in his Evidence before the Duke of Devonshire Committee to have been suppressed by the Council, but that the Committee are willing to shew it to any one deputed to ask a sight of it.

The Council appointed Mr. Milne Home, Mr. T. Stevenson, and Mr. Buchan to call at the Meteorological Office for the purpose of seeing the Documents referred to, viz Letter from Dr. Keith Johnston dated 9th May 1870, and reply thereto from Mr. Scott, dated 10th May 1870.

~~The S~~ Mr. Buchan submitted two letters dated 5th May 1875 and 19th February 1876 from Mr. Scott, ~~as~~ Secretary of the Permanent Committee appointed by the Vienna Congress relating to the Form for Publication of Observations, and regarding which the Council has had a good deal of correspondence with the Meteorological Committee of the Royal Society. It was remitted to Mr. Buchan to answer these letters in accordance with the views of the Council already expressed regarding them, if he should judge it expedient to do so.

Minute of Meeting of Council held in Society's Chambers on 28th June 1876

Present Mr. D. Milne Home, Chairman, Mr. Stevenson and Mr. Buchan

Letters of apology ~~we~~ for absence were received from Sir T. Buchan Hepburn, Dr. Sanderson, Dr. A. Mitchell, Dr. Robson Scott, Professor Balfour.

The Minutes of Meeting of 31 March were read and found correct.

It was agreed to hold the General Meeting of the Society on Friday the 7th July at 2 P.M., and that the following be the business to be brought before the Meeting.

1. Report from Council to General Meeting
2. Notice as to Observations of the Velocity of the Wind at different heights, by Mr. Stevenson
3. Meteorological Register kept by James Hoy, Esq, at Gordon Castle from 1781 to 1827, communicated to the Society by His Grace the Duke of Richmond and Gordon With remarks thereon by Mr. Buchan

A letter was read from Mr. E. M. Dixon, Glasgow, dated June 1876, in which he explained the nature of an inquiry he is engaged with, in connection with Dr. Russell, Medical Officer of Health for Glasgow, into the Ozone, and impurities of the air in different parts of that city; and made application for a Grant of £5 from the Society's Ozone Fund. The Council agreed to vote this sum to Mr. Dixon and instructed the Secretary

to write Mr Dixon inviting him to give an account of his proposed inquiry to the General Meeting.

Minute of Meeting of Council held in 5 St Andrew Square on 7th July 1876

Present Mr D. Milne Home, Chairman
Sir T. B. Hepburn,
Professor Balfour
Mr G. Hope
" T. Stevenson
Dr J. Sanderson
Dr Mitchell and
Mr Buchan

Apologies for absence were received from Dr Robson Scott, Mr R. Tennent, Mr Adie, and R. M. Smith.

The ~~Milne~~ Minutes of Meeting of 28th June were read and found correct.

The Chairman read draft Report to the General Meeting which was ~~considered and~~ adopted.

The Secretary intimated that he had written Mr Dixon of Glasgow inviting him to give some account to the General Meeting of his proposed inquiry into the air of Glasgow. A reply was read ~~stating that he (Mr Dixon)~~ expressing his (Mr Dixon's) regret that he ~~would~~ could not be able to attend the General Meeting.

On the motion of the Chairman, Colonel Bulger London was elected a Member of the Society £ – 10/6

Minute of Meeting of Council held in Society's Chambers on 2 ~~July~~ August 1876

~~Present~~ Present Mr. D. Milne Home chairman
Mr. A. J. Adie,
Dr. Sanderson
Mr. T. Stevenson
Sir W. J. Hope Johnstone
Sir T. Buchan Hepburn
Mr. Hope and
Mr. Buchan

Apologies for absence were received from Dr. Robson Scott and Mr. R. Tennent.

The Minutes of Meeting of Council held on 7th July were read and found correct.

It was agreed to exchange Publications with the Manchester & Salford Sanitary Association.

The Secretary was instructed to write the Rev. Robert Young, Teviothead Manse, with reference to Instruments for Observations at that place.

Three vols. of Meteorological Observations made at Lasswade from 1819 to 1845 were laid on the table, having been sent for the inspection of the Council by Dr. Smith, Milton Cottage, Lasswade. The Secretary was instructed to convey the cordial thanks of the Council to Dr. Smith for his courtesy in sending these valuable vols. to the Society, and to inquire whether the Society might not be favoured with a loan of these Registers for some time.

The Chairman made a statement to the Council regarding the Meteorological Commission of the Treasury, of which he has acted as one of the Members, and the present state of affairs with respect to the Society's application for a Grant from Government. On the recommendation of the chairman, the Council resolved to memorialize the Treasury, stating afresh the grounds of the Society's claims, and making application for an Annual Grant of about £500, this sum not to be exigible by the Society unless the Annual Subscriptions amounted to at least £300. The Council cordially expressed their thanks to the Chairman for the action he had taken in this matter.

The following were on the motion of the Chairman elected Members:—

Dr Duff, Elgin, rec^d by Mr. Topp of Ashgrove 10/6

(These four recommended by Rev W. Gregor, Manse, Pitsligo)

John Park, Esq Shipowner, Peterhead 10/6

Thomas Park Esq do do 10/6

Dr. Alexander Grieve, Fraserburgh 10/6

Dr James Kennedy, Rosehearty 10/6

Minute of Meeting of Council held in Society's Chambers on 9th August 1876.

Present Mr Milne Home, Chairman,

Dr Sanderson

Mr. Tennent

Mr. G. Hope

Mr A. J. Adie

Sir T. B. Hepburn

Sir W. J. Hope Johnstone, and

Mr. Buchan

Apologies for absence were received from Dr. Robson Scott, Dr. A. Mitchell and Mr. T. Stevenson.

The Minute of Meeting of 2 August was read and found correct.

The Chairman ~~read~~ stated the import ~~some~~ of a correspondence he had had with parties in London ~~Sir W. Stirling Maxwell, Mr. Lingen and Mr. Farrer~~ regarding the Grant from Government to the Society. It was resolved that the Council take no action in the meantime further than to approve of the Chairman's proposal that he write Sir Stafford Northcote explaining the position in which matters now stand, calling his attention particularly to the fact that the paragraph in their Report referring to the Scottish Meteorological Society which had been agreed upon by the Commissioners at their last Meeting on 6th Inst, had been deleted by Mr Lingen ~~without the sanction or even the knowledge of the Chairman and Mr. Milne Home~~; and the ~~Ch.~~ Council ~~further~~ very cordially approved of the line of action their chairman intimated viz not to sign the Report of the Commissioners as it at present stands with this clause deleted. By the desire of the Chairman the following were appointed to assist in framing the letter, viz. Sir Thomas B. Hepburn Dr Sanderson, Dr Mitchell, Mr Stevenson and Mr Buchan.

Minute of Meeting of Council held in Society's Chambers on November 17, 1876.

Present Mr. D. Milne Home Chairman
Mr. R. M. Smith,
Mr. Robert Tennent,
Mr. Thomas Stevenson,
Dr. Robson-Scott
Sir W. J. Hope Johnstone
Dr. A. Mitchell
Professor Balfour &
Mr. Buchan.

Apology for absence was received from Dr. Sanderson

The Minutes of ~~of~~ Meeting of August 9, were read and found correct.

The Council, at this the first Meeting held since the death of their President, the Marquis of Tweeddale desire to record in their Minutes an expression of the deep sorrow felt at that event by all the Members of Council and the Society's Office-Bearers. ~~and~~ The Council feel assured that all the Members of the Society will fully and sincerely sympathise with them in the loss the Society has sustained.

No one appreciated more justly than did the late President, the importance of the Society's work, and the desirableness of encouraging Meteorological observations to be carried on for both scientific and for practical uses. Several of the Inquiries in which ~~this~~ Society from time to time engaged were suggested by his Lordship, all of ~~and~~ these being ~~always~~ ~~were~~ practical in their aim and calculated to promote ~~the~~ important public interests. ~~National prosperity.~~ ~~But~~ All Inquiries, whether promoted ~~suggested~~ by himself or by others, he generously assisted, ~~liberally and~~ frequently giving pecuniary aid, when there was a probability that the investigations might be crippled through the Society's limited income.

The Secretary
[illegible]

The Council and the Society's Office-Bearers desire also to acknowledge with gratitude the uniform ~~[illegible]~~ urbanity and kindness shewn towards them by their late President, so that it became a pleasure to conduct those Inquiries in which he was more specially interested, and which ~~naturally~~ brought them into frequent presonal intercourse with his Lordship.

The Chairman made a verbal communication regarding the ~~position of~~ Society's application to Government for an Annual Grant. After some conversation the Council requested Mr. Milne Home to write Sir Stafford Northcote drawing his attention to the deletion from the Report of the Treasury Commission of the Clause referring to this Society.

The Council agreed to sanction ~~Hay Bridge~~ Ingliston, Midlothian, as a regular Station of the Society, trustworthy instruments for this Station having been provided by John Fortune Esq., who recently joined the Society.

The Secretary stated that he visited the Society's stations at Edinburgh, Yester, Sunnyside Montrose, Fettercairn, Johnstone Lodge, Aberdeen New Pitsligo, Elgin, and Culloden. He submitted a Report on the Instruments and their positions at these stations. In the case of one or two instruments some changes were recommended, which have already been, or are in course of being carried out.

Three MSS. volumes of Meteorological observations made from 1819 to 1845, nine times daily during a considerable portion of that time, by W. Denniston Esq. of Oakmount, Lasswade were presented to the Society by Mrs Edward

Gibson, 24 Lansdowne Road, Dublin, through Dr Smith, Lasswade. The Secretary was directed to convey to Mrs Gibson and Dr Smith the very cordial thanks of the Council for this valuable Gift.

A Letter was read from Professor Mohn Christiania, informing the Council that when the Norwegian Scientific Expedition touched at Thorshavn, Faro, in July last, he embraced the opportunity of comparing all the instruments used at the Society's Station there with the standard instruments which he had with him on the expedition. The results of the comparison, which were very satisfactory, were communicated by Professor Mohn to the Council. The Secretary was instructed to convey to Professor Mohn the best thanks of the Council for the important service he has voluntarily rendered to the Society in this matter.

A letter was read from Mr Duncan Secretary to the Commissioners of Northern Lighthouses, intimating that he had had a letter from Mr Scott of the Meteorological Office, London making application for the Meteorological observations made at the Northern Lighthouses of Scotland, and that in reply he had informed ~~[illegible]~~ Mr Scott that these Returns are regularly forwarded to this Society and retained here, and had in these circumstances suggested that if so disposed he should address himself to ~~this Society~~ the Council of this Society.

The desirability of Stations being established in connection with the Society at Dalnaspidal, Glenquoich, ~~[illegible]~~ Killin and Dumfield, regard-

ing which the Secretary had had some correspondence, was considered by the Council and it was remitted to the Chairman and and the Secretary to continue the enquiries and report to next Meeting of Council.

The Council authorized the insertion of the following Papers in the forthcoming number of the Society's Journal, viz:—

1. Report of the Ozone Committee
2. The Flowering of Spring Plants. By Alexander Buchan
3. On the Formation of Cloud due to Irregularities of the Earth's Surface. By Thomas Stevenson C.E., F.R.S.E., M.I.C.E.
4. Observations of Atmospheric Refraction in Azimuth. By Thomas Stevenson C.E. &c
5. Description of a Cloud-reflecting Compass. By Thomas Stevenson C.E. &c
6. Report on Marine Rain Gauges By Dr Black
7. Rainfall at Rothesay, from 1800 to 1875. By James M. Gale, C.E.
8. Inveresk Meteorological Register for 1875
9. Table of Observations connected with the Periodical Return of the Seasons.
10. Additional Rainfall Returns.
11. Report of the General Meeting of the Society held on 2nd March 1876.

On the Motion of the Chairman, John Fortune Esq Inglestone, recommended by Mr Gray, Southfield, was elected a Member of the Society.

Minute of Meeting of Council held in Society's Chambers on February 5, 1877.

Present D Milne Home, Chairman

Professor Balfour
Dr. Sanderson
Dr. Robson Scott,
Dr. A. Mitchell
Sir W. J. Hope Johnstone
Mr. R. M. Smith,
Mr. R. Tennent and
Mr. Buchan

Apology for absence was received from Mr. Stevenson

The Minutes of Meeting of Council on November 17, were read and found correct.

The Council resolve to express the deep sorrow which they feel at the death of the late George Hope Esq. of Bordlands, who has been for nearly the whole time since the Society was instituted one of the Members of Council. He was a warm supporter of the Society and did much in conjunction particularly with the late Henry Stephens Esq. Author of the Book of the Farm to urge its claims for support upon the farming interests of Scotland. Mr Hope was also for long an observer of Rain and Weather and latterly in 1873, became one of the Society's regular Observers. The Council authorize a copy of this Minute to be sent to his widow, at the same time offering her their expression of the deepest sympathy.

It was intimated that observations had ceased to be made at Bogside owing to the death of Mr. Bruce, the observer and that there was no likelihood of them being resumed.

A correspondence was read regarding the establishment of Stations at Glen Quoich, Dalnaspidal, and Dunkeld and Killin. As regards Dalnaspidal Mr. Tennent was asked to write Mr. Mattieson, chairman of the Highland Railway regarding Instruments, and the Secretary stated that he hoped to hear in a few days from Mr. Malcolm, Factor for Mr Bass, MP

regarding Instruments and other arrangements for Glen Ercich.

~~The Secretary read~~ A letter was read from Professor Grant, the Society's Observer for Glasgow, intimating that no more observations were to be supplied by the Observatory to the Society after December 1876. The Secretary stated that he had gone to Glasgow to inquire regarding an observer for that city, and that there was every probability that the Education Committee of the Established Church ~~of~~ in Glasgow would make arrangements for the observations being made at the ~~Fe~~ Female Students Boarding Establishment under the superintendance of Mr. E. M. Dixon and Mrs. Navin.

A letter was read from Mr. Scott asking the loan of the observations received by the Society from the Northern Lighthouses at Bell Rock, Pentland Skerries, Kinnaird Head, Mull of Kintyre, and Sanda. It was agreed to give the loan of the Schedules asked for.

The Chairman made a verbal ~~report~~ communication regarding the present position of the Society's application to Government for an Annual Grant.

It was arranged that the Half-yearly General Meeting of the Society should be held on 21 Feby. at 2 O.clock, and that the following subjects be brought before the Meeting:—

1. Report from the Council of the Society.
2. On Methods of estimating Ozone and other Constituents of the Atmosphere. By E. M. Dixon Esq. B. Sc. Officer of health, Glasgow.
3. On the peculiarities of the weather of December and

January last. By Mr Buchan, Secretary
4. Observations of Rainfall at Sea on board Ship. By Dr Black, Surgeon-Major.
On the motion of the Chairman the following gentlemen were elected members of the Society:—
M. A. Bass, Esq M.P. recommended by Mr Milne Home £10.10 Life
J. G. Baird Hay, Esq of Belton recom^d by Dr Sanderson
Archibald Young Esq., 22 Royal Circus recom^d by Mr Tennent
Rev. Patrick Muirhead, Kippen, recom^d by Mr Tennent
Rev. Dr McCulloch, Cheltenham, recom^d by Mr Tennent. 1-0-0
Lord Lionel Cecil, Orchard Mains, Innerleithen 10-6
John Bisset Esq. £1-1-0

Minute of Meeting of Council held on 20 Feb^y 1877 in Society's Chambers.
Present. D^r Milne Home. Chairman.
Dr Sanderson
Dr Mitchell
Mr R. Tennent
" R. M. Smith
" Adie
Dr Robson Scott
Sir W. J. H. Johnston and
Mr Buchan
Apology for Absence was received from Mr Stevenson
The Minutes of Meeting of Feb 5^th were read and found correct.
A letter was read from the Chairman

to the Council with reference to the Report of the Treasury Commission just published. This letter was considered by the Council and it was agreed that it be incorporated in the ~~Minute~~ Report from the Council to the General Meeting to be held tomorrow.

It was agreed that the Lord Provost take the chair at the General Meeting.

A letter was read from Mr. E. M. Dixon, intimating to the Council that the Normal School Committee of the Church of Scotland Glasgow has authorized the erection of a Station at the Boarding House at Garnet Bank, and has placed at his disposal a sum of £10 for the purchase of Instruments for the observations. The Secretary was directed to return the cordial thanks of the Council to the Chairman of the Normal School Committee and to Mr. Dixon for the assistance they have given the Council in this matter.

A letter from Mr. Stevenson to the Duke of Richmond & Gordon having been read ~~asking~~ inquiring whether his Grace would be willing to be nominated as President of the Society, and a reply from his Grace having been also read intimating his willingness to accept the Presidentship of the Society, the Council agreed to suggest ~~to the~~ in their Report to the General Meeting of the Members that the Duke of Richmond and

Gordon be elected President of the Society. The Council also agreed to suggest the names of Professor McKendrick, Glasgow, and Dr. J. B. Russell, Medical Officer of Health for Glasgow, to the General Meeting, for election as Members of Council, in room of Mr. George Hope, deceased, and Sir Thomas Buchan Hepburn, who has gone to reside in England for sometime.

~~It was~~ On the motion of the Chairman, the Duke of Richmond and Gordon was elected a Member of the Society.

Minute of Meeting of Council held on 21 February, in 5 St Andrew Square

Present Mr. D. Milne Home, Chairman
Dr. Sanderson
Mr. Tennent
Dr. Robson Scott
Mr. A Jeffdie
Mr. Stevenson
Professor Crum Brown
Sir W. J. H. Johnstone
Mr. R M Smith
Professor Balfour,
Dr. A. Mitchell, and
Mr Buchan

Apology for absence was received from Dr. Chiene.

The Minutes of Meeting of 20 inst. were read and found correct.

The Report from the Council to the General Meeting was ~~con~~ considered and

and finally adjusted.

On the motion of the chairman, Sir Walter Simpson, Bart was elected a Member of the Society.

Minute of Meeting of Council held in Society's Chambers on 19 March 1877.

Present:- Mr Milne Home, Chairman
.. Dr Sanderson
.. Mr R. M. Smith
.. T. Stevenson
.. R. Tennent
Sir W. Hope Johnstone
Dr Robson Scott
.. Chiene
.. Arthur Mitchell and
Mr Buchan

The Minutes of Meeting of 21st Feb: were read and found correct.

A Letter was read from Mr Hope of Bordlands intimating that the observations hitherto made at Bordlands could not be continued, but that he would be glad should the Council desire it, to make observations for the Society at Oxwell Mains, near Dunbar. The Council agreed to sanction Oxwell Mains as one of the Stations of the Society.

A Letter was read from the Duke of Richmond and Gordon, dated Feb. 23rd intimating His Grace's cordial acceptance of the President-ship.

The Chairman stated that the Chancellor of the Exchequer ~~having~~ had expressed his willingness to receive the Deputation with reference to the application of the Society for a Grant, ~~He had~~ proposed that

~~issued~~ be issued a circular to all the Scotch Members of Parliament and others interested in the Society's Claim for a Government inviting them to join the Deputation. This proposal was agreed to.

It was agreed that the following Memorial, in pursuance of the Resolution passed at the General Meeting of the Society on 21st Feb. be forwarded to the ~~President~~ H. M. Treasury:—

To the Lords Commissioners of
Her Majesty's Treasury.

The Memorial of the Scottish
Meteorological Society

Sheweth

That they learn from the Report of the Treasury Commissioners on Meteorology recently laid before Parliament that it is proposed that the administration of the yearly Grant for Meteorology should be vested absolutely in a Committee consisting of Members to be recommended by the Royal Society of London.

As it is understood that the Parliamentary Grant is applicable to the whole United Kingdom Your Memorialists would respectfully submit, that that the said administrative Committee should be so far representative that one of the Members may be appointed by Your Lordships, at the suggestion of the Royal Society of Edinburgh and another at the suggestion of the Royal Irish Academy.

Minute of Meeting of Council held in Society's Chambers on May 8, 1877.

Present Mr. D. Milne Home, Chairman
Dr. A. Mitchell
Dr. Sanderson

Mr R Tennent,
Mr R M Smith, and
Mr. Buchan

Apologies for absence were received from Mr. Stevenson, Professor Balfour, and Professor Crum Brown.

The Minute of Meeting of March 19, was read and found correct.

A framed Photograph of the late Marquis of Tweeddale, President of the Society was presented to the Society by the Marquis of Tweeddale. The Secretary was instructed to convey to his Lordship the cordial thanks of the Council for so appropriate and highly-prized Memorial of their late President.

The Chairman made a statement regarding the Deputation ~~it is proposed~~ to the Chancellor of the Exchequer. The Council thereupon adopted the following Minute:—

"The Council having learnt, through the Society's President, His Grace the Duke of Richmond and Gordon, that Sir Stafford Northcote on being again requested to name a day for receiving the Deputation which was formed sometime ago to wait upon him to urge the Society's claims for Government assistance, had replied that,
on account, partly of the need of further inquiry and partly of the pressure of official business he cannot at present name any day; the Council regrets very much this second postponement, and finding that their Chairman and also their Honorary Secretary can be in London a few days

hence, the Council requests these Gentlemen to convene, as soon as possible a Meeting of the Members of the Deputation in order to confer with them as to the course to be now taken.

On the motion of the Chairman the Marquis of Tweeddale was elected a Member of the Society, his Lordship being recommended by Dr. Sanderson

Minute of Meeting of Council held in Society's Chambers on May 26, 1877.

Present Mr. Milne Home, Chairman
Sir W. J. Hope Johnstone
Dr. Sanderson
Mr. R. M. Smith
Mr. Stevenson,
Mr. Buchan and
by invitation of Council Mr. Donald McGregor M.P.

Apologies for absence were received from Mr. Tennent, Dr. Mitchell, and Professor McKendrick.

Letters were read from Sir G. G. Montgomerie, Sir Robert Anstruther, Mr. D. McLaren, and Mr. James Cowan, Members of Parliament regretting their inability to be present at the Meeting of Council.

The Minutes of the Meeting of Council of May 8, 1877, were read and found correct.

The Chairman ~~reported~~ stated that immediately after last Meeting of Council, he received a letter intimating that the Chancellor of the Exchequer had fixed Tuesday, May 15, for received the Deputation. He then

gave a brief account of what passed on that occasion.

A letter, dated May 17, 1877, from Mr. Stevenson to Mr. Milne ~~Home~~ was read, the object of which was to draw attention to certain remarks made by Sir Stafford Northcote to the Deputation, as reported in the Scotsman newspaper, in which Sir Stafford appears to have been under some misapprehension as to the nature of the Claims of the Society for State assistance. The chairman stated that on receiving this letter he forwarded it to the Duke of Richmond and Gordon, President with the view ~~and~~ that his Grace ~~had thereafter sent~~ send it to Sir Stafford Northcote.

The chairman read a letter from Mr. Lingen, Permanent Secretary to the Treasury, with relative Memorandum, with his (the chairman's reply thereto), with reference to a proposal on the part of Treasury to give the Society £1000 for the services it has hitherto rendered to the Government.

A letter was read from Sir Stafford Northcote to the Duke of Richmond and Gordon, dated May 17, 1877, intimating that he was unable to make or to propose to Parliament, a Grant to the Society, on the ground that if he did so it would be the introduction of a policy which he ~~was not~~ could not initiate.

After a lengthened conversation on the whole subject, it was remitted to the Chairman, Mr. Stevenson, and Dr. Sanderson

to draft a letter in answer to Sir Stafford Northcote's letter, and it was agreed that ~~another~~ a Meeting of Council be called for Wednesday the 30th inst., at 2 PM to consider the letter and adjust it before sending it to the Duke of Richmond and Gordon

Minute of Meeting of Council held in Society's Chambers on May 30, 1877.

Present Mr. D. Milne Home, Chairman,
Sir W. J. Hope Johnstone
Mr. A. J. Adie,
Dr. Sanderson
Mr. Stevenson
Professor Balfour, and
Mr. Buchan, and
by invitation of Council Mr. McLaren M.P.

Apologies for absence were received from Mr. Tennent, Dr. Mitchell, and Mr. R. M. Smith.

The Minutes of Meeting of 26th inst were read and found correct.

A letter was read from Mr. Donald McGregor M.P., expressing his cordial approval ~~with~~ of the letter which the chairman had drafted ~~in answer~~ with reference to Sir Stafford Northcote's letter ~~date~~ to the Duke of Richmond and Gordon dated May 17.

The draft letter of the Chairman to the Duke of Richmond & Gordon, ~~in answer~~ with reference to Sir Stafford's letter, was then carefully gone over by the Council, and after a few very slight changes was highly approved of by the Council, and the Chairman was requested to forward it to His Grace with a view to its being submitted by His Grace to the Chancellor of the Exchequer.

Minute of Meeting of Council held in Society's Chambers on 18th June 1877.

Present:- D. Milne Home, Chairman.
Mr R. Tennent
Prof. Balfour
" Geikie
Mr. R. M. Smith
Dr Robson Scott
Prof. Crum Brown
Mr T. Stevenson
Sir W. J. Hope Johnstone and
Mr Buchan

The Minutes of Meeting of 30th May were read and found correct.

dated 28 May A Letter, was read from Capt. Forbes Mackay Carskey House, Campbelton, offering to make observations for the Society at that place. Mr Buchan was instructed to communicate with Capt Mackay intimating that the Council agree to sanction Carskey House as one of the regular Stations of the Society.

Letters were read from John Park Esq, Provost of Fraserburgh, and Robert Sutherland, Secretary to the Harbour Commissioners of that town, asking if the Society would approve of a Station there, the expense of establishing such a station, and if the Society would aid the local authorities in the matter. The Secretary was instructed to say that the Council would agree to sanction Fraserburgh as a regular Station of the Society but that they regret the Funds of the Society do not enable them to give assistance towards the purchase of Instruments.

~~A Letter from H. M. Treasury, to the Duke of Richmond and Gordon was read dated 13 June 1877.~~

The Council had laid before them a Letter

to His Grace the Duke of Richmond and Gordon from Mr Lingen of the Treasury dated 13 inst.

The Council is very much pleased with the friendly tone of this letter and learns with satisfaction the arrangements explained in it which will (as Mr Lingen states) in future enable the Scottish Meteorological Society to obtain a share in the public assistance offered through the new Council for the prosecution of Meteorological enquiry.

The Council perceives from the Treasury letter, that My Lords will not agree that the Society shall receive pecuniary aid direct from the Government; and that "the Government cannot consent to offer aid in any other form to the Society", than through the new Council.

The Society's Council agrees to waive the objection it has expressed to the arrangements and to accept the decision of the Government; - on the understanding that the new Council referred to shall have liberty to give to the Society out of the Parliamentary Grant to be administered by the Council, such aid as may be necessary for carrying on the objects and operations of the Society.

With regard to the offer ~~of~~ by Her Majesty's Government of £1000 to be paid now by the Treasury on account of the observations obtained by the Scottish Registrar General from Stations of the Society since the year 1858 to the present time, the Council resolves to accept the offer and to express their thanks for the new proof of appreciation by the Government of the Society's services to a particular Government Department.

With reference to the future Returns of the Society to the Registrar General for Scotland the Council understands that the Treasury unite the payment

of this work to the consideration of the new Meteorological Council.

On the motion of the Chairman Capt. Forbes Mackay, recommended by Mr Stevenson, was elected a Member of the Society. £1.1.

Minutes of Meeting of Council held in Society's Chambers on July 11, 1877.

Present Mr. D. Milne Home, Chairman,
Professor Geikie
Dr. Mitchell,
Professor Balfour, and
Mr Buchan.

Apologies for absence were received from Dr. Sanderson, Mr. Stevenson & Mr. Tennant.

The Minutes of Meeting of June 18, were read and found correct.

It was agreed that the General Meeting be held at 5 St Andrews Square on Thursday the 26th inst. at 2 PM and that the following subjects be brought before the meeting:—

1 Report from Council
2. Address by Chairman of Council
3. Report on the Temperature of the Sea at Peterhead, as deduced from Observations by W. Boyd, Esq. with Thermometers continuously immersed, by the Secretary.
4 Report on Relations of the Herring Fishery to Meteorology, for the four years 1873-76. By the Secretary.

A letter was read from Dr. Black regretting that he would not be able to be present at the Meeting and that

consequently his Paper on Ocean Rainfall postponed at last General Meeting of the Society must still lie over.

On the motion of the Chairman William A. Anderson, Esq. 10 Park Terrace. Stirling was elected a Member of the Society.

A letter ~~to~~ from Mr. Lingen of H. M. Treasury dated July 4th, 1877 was read. In this letter it is stated that "My Lords do not consider that anything "further remains to be done on their part, "but to leave the New Council free to "adopt its own course in giving effect "to the recommendations of the recent "Treasury Committee of Inquiry." The Chairman was requested to send a copy of this letter to those Members of Parliament interested in the Society claim for assistance from Government, and that their attention be drawn at the same time to the fact that the New Meteorological Council will not, according to the terms of the Report of the recent Treasury Commission, have power to give the Society the assistance required.

Minutes of Meeting of Council held in Society's Chamber on July 23rd 1877.

Present:— Dr. Milne Home, Chairman
Dr. Mitchell
Prof. Balfour
" Geikie
Mr. Stevenson and
Mr. Buchan

Apologies for absence were received from Dr. Sanderson and Mr. Tennent.

The Minutes of Meeting July 11th 1877 were read and found correct.

A Letter dated 16 July 1877 was read from Mr Scott, Meteorological Office, London, stating that the Meteorological Committee of the Royal Society had held its last Meeting and had handed over its functions to the Council, and states the only changes in the Office are that the future Council are to be paid and that Mr Scott's title is their Secretary instead of of Director as heretofore.

~~A Letter dated 16 July 1877 was read from Mr Scott, Secretary of the Permanent Committee of the Meteorological Congress at Vienna, intimating that the Meteorological Congress which was to have been held at Rome in September next is to be postpone till next year.~~

delete AB

A conversation took place on the Debate in Parliament on the Meteorological vote after which it was agreed to make a general appeal to the Country for increased support. Prof. Geikie kindly undertook to prepare a ~~Report~~ Circular and it was remitted to a Committee consisting of the Chairman, Dr Mitchell, Dr Sanderson, Mr Stevenson and the Secretary to ~~carry out~~ make the necessary arrangements.

It was agreed that the Cordial thanks of the Council be given to the Duke of Richmond and Gordon, the Duke of Buccleuch and those Members of Parliament who have aided the Society in bringing its claims for State assistance before the Government

Minutes of Meeting of Council held in 5 St Andrew Square on July 26, 1877.

Sederunt, —

Mr. D. Milne Home, Chairman,
Dr. Robson Scott,
Sir W. J. Hope Johnstone, and
Mr. Buchan,
Apologies for absence were received from Mr. Stevenson, Mr. Tennent, Dr. Sanderson, Dr. Mitchell, ~~and~~ Professor Balfour, and Professor Geikie.

The Minutes of Meeting of July 23 were read and found correct.

The draft report from the Council to the General Meeting was then read and approved of.

Minutes of Meeting of Council in Society's chambers on August 28, 1877.

There being no other members present, but Mr Milne Home, Chairman, No Meeting was held.

Minutes of Meeting of Council held in Society's Chambers on 27 Nov. 1877.

Present. – Mr D. Milne Home, Chairman
Sir William Hope Johnston
Dr Sanderson
Mr Tennent
Dr Robson Scott
Mr R. M. Smith
Prof Geikie
Mr Stevenson
Mr Adie
Prof. Balfour and
Mr Buchan

Apology was received for absence from Prof ~~Mc Kendr~~ J. G. Mc Kendrick, Glasgow

The Minutes of Meeting of Council held on

26 July 1877, were read and found correct.

Mr Buchan reported that he had visited the following Stations, Balfour Castle; Balloch Castle; Cameron House; Auchendennan; Leven Water; Milne Graden and Tweed Chain Bridge, Berwick, and submitted Reports as to the condition of these stations. It was agreed to sanction Paxton House, Berwickshire as a Station of the Society, Captain Milne Home M.P. having intimated his intention to furnish the necessary Instruments.

A Letter to the Hon. Secretary from Mr Archibald Young ~~dated~~ one of the Commissioners on the Herring Fisheries, dated November 24th 1877 was read, [margin: requesting the sanction of the Council to publish in the appendix to their forthcoming Report the Statement and charts] ~~asking permission from the Council on behalf of the commissioners to publish in their Report the Statement and Diagrams~~ submitted to the Commission by Mr Buchan when he gave his evidence in 22nd August ~~last~~. The Council readily granted the permission asked.

The Treasurer submitted a Report regarding the Circular which had been prepared with the view of increasing the Membership of the Society from which it appeared that 1000 copies had been distributed and that the following 21 Gentlemen had intimated their desire to become Members of the Society —

Life Members

Alexander C. Cowan, M.D. Greenhill Lodge, Morningside
Sir George H. S. Douglas, Bart. M.P. Springwood Park, Kelso
Prof. Douglas Maclagan M.D., 28 Heriot Row, Edinburgh
Sir William Miller of Manderston, Bart. Dunse.

Annual Members

W. F. H. Arundell of Barjarg, Dumfries
James Ballingall, Eallabus, Islay, Greenock
Fred. W. Barry, M.D., B.Sc., 7 John's Place Leith
~~John Christie~~ Adniston, Tranent
J. Graham Campbell of Shirvan, Castleton, Lochgilphead
T. S. Clouston, M.D., Tipperlinn House, Morningside
John Crean, J.P. Bunchrew Manure Works Kirkton, Inverness
Henry Davidson, Muirhouse, Davidson's Mains
Malcolm Dunn, Dalkeith Gardens, Dalkeith.
John Orr Ewing, Alexandria, Glasgow
Captain Milne Home, of Wedderburn, M.P. Paxton Ho. Berwick
Dr James Jamieson 6 Buccleuch Place, Edinburgh
John Lorn, M.D. 27 Drummond Place Edinburgh
John Milne, Trinity Grove, Trinity
Sir William Thomson, The University. Glasgow
Dr Charles E. Underhill, 8 Coates Cres. Edinburgh
J. Wilson, M.D. 12 Dean Terrace Edinburgh

On the Motion of the Chairman the above were elected Members of the Society.

The Treasurer intimated that the £1000 voted ~~to the Society~~ for services rendered to a Government Department during the present and past years had been paid, and was lodged in the Bank. It was remitted to the Finance Committee to ~~rep~~ report to next Meeting of Council on the Financial position of the Society including the disposal of the £1000, the Committee consisting of Dr Sanderson, Convenor, Mr Adie, Mr R. M. Smith Dr Robson-Scott and Mr Tennent.

A Conversation took place regarding the desirableness of an increase of Subscriptions from the Insurance Office and

Dr Sanderson Mr Stevenson Mr R. M. Smith and Mr Buchan were appointed to wait on the different Offices with this view on an early opportunity.

The Treasurer intimated that the Royal College of Physicians had made a donation of Ten Guineas to the Society.

A Letter was read from Professor Piazzi Smyth dated November 22nd 1877 offering to the Society for publication in their Journal a Paper ~~for~~ on ~~Weather~~ Rain Band Spectroscopy. The Secretary was directed to confer with Professor Smyth regarding this matter but particularly regarding the Illustrations for the Paper, and report to next Meeting

A Letter was read from Dr Bruce Kirkwall, intimating his inability to continue the observations at that Station, but that Mr Spence Banker in Kirkwall ~~would be~~ was ~~ready~~ willing to become observer. The Secretary was directed to write Dr Bruce thanking him for his services as observer and for securing the services of Mr Spence as his Successor.

Letters were read from Mr Bryson Cullen House, Cullen and from Dr T. Aitken, Inverness, regarding the establishing of Stations at these places. The Secretary was instructed to make inquiries and report.

A Letter from Mr Henry Wright Dunrobin Castle, dated 6 September 1877 was read regarding the establishment of Stations for the observation of Temperature of some of the rivers of Sutherlandshire and seas adjoining their mouths in connection with the

Enquiry into the causes of the earliness and lateness of our Salmon Rivers. The Secretary was directed to answer the enquiries made by Mr. Wright.

Mr Buchan laid before the Council a letter from Professor Stephen Smith, Chairman of the Meteorological Council dated July 31st 1877, and Extract Minute of the Council, offering him the Office of their Inspector and Agent for Scotland. Mr Buchan intimated that he had failed to obtain a Meeting of Council owing to Members being in the Country and that as there appeared no likelihood of a Meeting being secured for 5 or 6 weeks to come, he had on 30 August, after advising with some of the Members of Council who were in town, written to Professor Smith, Chairman, accepting the offer. Mr Buchan also read a letter to Professor Smith, dated Nov 7th and Professor Smith's reply ~~thereto~~ dated Nov 12th.

The Council after some conversation, during which Mr Buchan had retired, agreed to adjourn the Meeting for the further consideration of the Subject.

Minute of Meeting of Council held in Society's Chambers, December 7, 1877

Present. Mr D. Milne Home, Chairman
Dr. Robson Scott.
Dr. Sanderson
Mr. R. Tennent.
Mr. R. M Smith
Professor Balfour
Sir W. J. Hope Johnstone
Mr. Stevenson,

Mr. Adie,
Professor Geikie, and
Mr. Buchan.

Apology for absence was received from Dr. Mitchell.

The Minutes of Meeting of November 27 were read and found correct.

The consideration of the subject of the correspondence between Professor H. J. Stephen Smith and Mr. Buchan was resumed, and the Council after a somewhat lengthened discussion of the subject agreed in the meantime to take no action in the matter.

during which Mr. Buchan had retired

Dr. Sanderson submitted a Report from the Finance Committee, and the Council agreed

That all Debts of the Society be immediately paid,

That Two Hundred Pounds be paid to the Secretary Mr. Buchan for past Services, and Fifty Pounds be paid his Assistant for her services, out the Fund of £1000, and

That £ be ~~kept~~ lodged with the Union Bank on deposit receipts in such Sums as can be drawn when required.

The following were, on the motion of the Chairman, elected Members of the Society:—

Life Member

Alexander Howe, Esq W.S., 17 Moray Place, £10..10..

Ordinary Members

Rev. F. E. Belcombe, 14 Merchiston Avenue, 20/-

Right Rev. Bishop Cotterill 21/-
Robert H. Bow Esq C.E. 7 South Grey Street,
P. Denny, Esq C.E., Dumbarton 42/-
Professor Dims F. C. College. 21/-
Messrs. A. Laird & Co, Glasgow
Dr. C. Morehead, 11 North Manor Place 21/-
John McCulloch, Esq 11 Duke Street 10/-
Patrick Playfair, Esq 12 Woodside Ter. Glasgow 21/-
Hugh Brown, Esq 137 West George St. Glasgow 21/-

W. J. Hope Johnstone

Minutes of Meeting of Council held in Society's Chambers, December 28, 1877.

Present, — Admiral Sir W. J. H. Johnstone, in the chair
Mr. R. Tennent
Dr Robson Scott
Mr. R. M. Smith
Mr. T. Stevenson, and
Mr. Buchan

Apologies for absence were received from Mr. D. Milne Home and Dr. Sanderson.

It was agreed to apply to the Committee entrusted with the disbursement of the £4000 Research Fund for Grants for the following three objects:—

1. A Grant of £50 in aid of the Anemometrical Inquiry suggested and carried on by Mr. Stevenson, Honorary Secretary.

2 A Grant of £60 to aid in the Investigations of the Herring Committee.

3 A Grant of £30 to aid in the Inquiry into the earliness or lateness of the Salmon Rivers of Scotland.

With regard to the last of these Enquiries it was stated that, on the suggestion of Mr. Milne Home, Mr. J. Leslie, and Mr. W. Gordon Cumming, two of the Commissioners of Scottish Salmon Fisheries had expressed their readiness to sign this application for a Grant, cordially recommending it.

The Secretary reported that he had visited the Society's Stations at Annanhill, Girvan, and Dollar.

Mr. Buchan stated that considering the desirableness of obtaining some assistance in the heavy work of reducing the Schedules of the Observers, he had had some conversation with Professor Piazzi Smyth, as to whether he would agree to Mr. Heath, Junior Assistant at the Royal Observatory, undertaking the work, or so much of it as he might be able to overtake at his own house consistent with the proper discharge of his duties as Assistant at the Observatory. Professor Smyth agreed to the carrying out of such an arrangement on the further understanding that such agreement would only be regarded as of a temporary and tentative nature. The Council agreed that on these terms Mr. Buchan enter into an arrangement with Mr. Heath.

The following were on the motion of the Chairman elected Members of the Society:—

Life Member

John Napier Glasgow £ 21..0..0

~~Ordinary~~ Annual Member

James Sime, Craigmount Ho.	£	1"1"0
Capt. Arundle Jackson, The Priory, St Andrews		1"0"0
John K. Watson, 14 Blackford Rd		1"0"0
William Thomson, Royston Manchester		10"0
Rev. Rob. Boog Watson, 3 Bruntsfield Pl		10"0
Dr. Anderson Kirkwood, 145 W. George St. Glasgow		1"1"0
J. F. Rodger, SSC, 1 Royal Circus		1"1"0
Admiral Farquhar of Carlogie, recd by Admiral Sir J. H. Johnstone		1"0"0

Minutes of Meeting of Council held in Society Chambers, January 29, 1878.

Present Sir W. J. Hope Johnstone in the chair
Dr. Robson Scott,
Mr. Tennant,
Dr. Sanderson,
Mr. Stevenson
Mr. R. M. Smith
Professor Balfour and
Mr. Buchan

Apology for absence was received from Mr Milne Home.

The Minutes of the Meeting of Dec. 28 were read and found correct.

The Secretary intimated that the three applications from the Society for a Grants out of the £4000 Research Fund were posted on Saturday 29 December, the application for a Grant in connection with the Salmon Inquiry having been signed by Mr. James Leslie C.E. and Mr. W. Gordon Cumming as Commissioners recommending it; and that notice of their receipt had been received by the Secretaries of the Fund.

Dr. Sanderson intimated that a Deputation

from the Council consisting of himself, Mr R. M. Smith Mr Stevenson and Mr Buchan had waited on the Insurance Companies and laid before them the claims of the Society for increased support from the Cos. on account of what the Society has done in the various investigations it has undertaken into the relations between Weather and Health Death-rate. He proposed that a formal application should be lodged with the Cos. and that the application be accompanied with a large sheet shewing by Curves (coloured) the Influence of Weather on the Death-rate from the different Diseases. The Council agreed to this proposal and the Secretary was directed to prepare the sheet of Curves.

It was ~~proposed~~ resolved that the General Meeting be held about or after the middle of February, it being left to the Chairman and the Secretaries to fix the day. It was agreed that the subject to be brought before the Meeting be The Weather of 1877 by the Secretary Mr. Buchan.

It was suggested that the Members of Council who retire be Dr. Matthews Duncan, ~~who has~~ and Sir Alexander Milne, and that the new Members to be submitted to the Meeting be The Marquis of Tweeddale and Mr. J. D. Marwick, Town Clerk of Glasgow, and that Mr. Adie be re-elected.

The following Gentlemen were on the motion of the Chairman elected Members of the Society:—

Bell, Dr. Charles		£0..10..0
Brown, J. Allan, 9 Alencorn Place, London		10..0
Dun, John, of Gilston.		10..0
Muirhead Dr Henry, Bushy Hill, Cambuslang		1..1..0
Miller, C. H. of Plainhill.		1..1..0
Robinson, J. Carr.		1..0..0
Stewart, Prof. Grainger, 15 Charlotte Square		1..1..0
Turnbull, W. 14 Lansdowne Cres.		1..1..0

Minutes of Meeting of Council held in MacGregor's Royal Hotel, Princes St. February 21st 1878.

Present Mr. D. Milne Home, Chairman,
Dr. Robson Scott
Mr. R. Tennent,
Mr. J. Stevenson, and
Mr. Buchan

Apology for Absence was received from Dr. Sanderson.

The Minutes of Meeting of January 22nd were read and found correct.

The Secretary stated that the Marquis of Tweeddale and Mr. Marwick had intimated their willingness to act on the Council.

A draft Report from the Council to the General Meeting which had been prepared by the Chairman was read and approved of.

The Council authorized the insertion of the following Papers in the forthcoming Numbers of the Society's Journal viz:—

1 The Meteorology of Gordon Castle, from July 1781 to November 1827, from observations made by James Hoy, F.L.S. By the Meteorol. Secretary.

to General Meeting of the Society in July 1877

2. Rain-band Spectroscopy. By Professor C. Piazzi Smyth, F.R.S.E., Astronomer-Royal for Scotland.
3. On the Horizontal Visual Penetrability of the Atmosphere; or, the Extreme Limits of View along the Earth's Surface. By Alexander Cruickshank, M.A., Aberdeen.
4. Observations of the Simultaneous Force of the Wind at different Heights above the Earth's Surface. By Thomas Stevenson, M.I.C.E., F.R.S.E., F.G.S.
5. Observations on Evaporation at Glencorse Reservoir, from 1857 to 1876. By James A. Leslie, C.E.
6. Address by D. Milne Home of Wedderburn, LL.D., F.R.S.E., Chairman of Council.
7. Meteorological Queries. By R. Tennent, F.R.S.E.
8. Reports of the Half-yearly General Meetings of the Society held on 7th July 1876, 21st February 1877, and 26th July 1877.
9. Table of Observations connected with the Periodical Return of the Seasons for 1876.
10. Meteorological Register for Inveresk for 1876.
11. Additional Rainfall Returns for 1876.
12. Meteorologial Returns, with Notes of the Prevailing Weather and States of Vegetation at the Society's Stations for 1876.

7° The following were on the motion of the Chairman elected Members of the Society

Life Members

W. J. Haig, Esq of Dunse Castle	£ 10"10"0
J Richard Haig, Esq of Blairhill, Dollar	10"10"0

Annual Members

Miss Douglas, 25 Chester Street	£ 0"10"6
Charles S. France, Esq Penicuick	0"15"0
Alexander Fraser, Esq Canonmills Lodge	1"1"0
Alexander Galloway, Esq Glendelvine, Dunkeld	2"2"0
Robert Gairdner, Esq Thorntown Ho. Kilmarnock	0"10"0
Robert W. Gordon Esq Cowlongan Mains, Annan	0"10"0
Thomas Gordon, Esq 11 Grosvenor Crescent	1"0"0
Richard Henderson, Esq. The Grange, Kirkcudbright	1"1"0
W. W. Hunter, Esq LLD, 9 Douglas Crescent	1"1"0
Walter Kidd. ~~Esq~~ Balleny, Balerno.	0"10"0
Alexander H. Lee, Esq of Blairhoyle, Stirling	1"1"0
J. Livingstone Learmonth Esq of Park Hall, Polmont	2"2"0
Robert Millar, Esq. Alloway Cottage, Ayr	1"1"0
J. R. Reid, 4 North Charlotte ~~Square~~ St	1"0"0
Adam Black Richardson, Esq West Hartlepool	1"1"0
C. Roger, Esq, 40 Union Street, Dundee	0"10"0
Thomas Bond Sprague, Esq, 29 Buckingham Terrace	1"1"0

Minute of Meeting of Council held in Society Chambers, on May 14, 1878.

Present Mr. Milne Home, Chairman
Dr. Robson Scott
Dr. Sanderson,
Professor Crum Brown
Mr. A. J. Adie,
Mr. Stevenson, and
Mr. Buchan,

Apologies for absence were received from Dr. Aitchell and Mr. Tennent

The Minutes of Meeting of February 21, were read and found correct.

A letter was read from M. Bertollet, Paris, intimating that the Diagram of the Weather and Mortality of London, had been received by him, and that a good place had been assigned to it in the Exhibition in the Section of Anthropology under his charge.

Dr. Sanderson intimated that the applications made to the Insurance ~~Co~~ Companies, had been very successful so far as the results had been made known, and that the circulation of the Circular had been prosecuted with assiduity and with success, there being 36 New Members to be proposed at this Meeting of the Council.

Mr. Buchan stated that on invitation of the Highland & Agricultural Society, he had accompanied Mr. F. N. Menzies, and Dr. Aitken to the Experimental Fields leased by that Society at Longniddry and Pumpherston and had arranged with them regarding the establishment of a complete Meteorolo-

The Council were much pleased with the action taken by the High. and Agri. Society in this matter and instructed their Secretary to give all assistance in his power in furthering the objects in view

-gical Station at each Experimental Field in all respects identical with the Society's Stations, the Directors having resolved that side by side with the Experiments with Manures &c there should be a complete Meteorological ~~Obs~~ Station so that the different kinds of weather at each Field may be taken into consideration in comparing the results of each year's produce.

A communication was received from Mr. F. N. Menzies regarding the establishment of a Station in Glen Lyon, his friend Mr. Conacher, being prepared to provide the necessary Instruments and make the observations. The Council agreed to sanction Glenlyon as one of its regular Stations, considering it as a valuable addition to its Station from its important position in the west of Perthshire and its great distance from any of the Society's existing Stations, and requested the Secretary to thank Mr. Menzies for his services in this matter.

A letter was read from Mr Lowey Marchmont offered that he was prepared to supply a set of Instruments to his father the Gardener at Fingask Cas. Carse of Gowrie, provided the Council sanctioned that as one of its Stations. From ~~the importance of this~~ its position in one of the important agricultural districts of Scotland, the Council agreed to sanction Fingask Cas. as one of its Stations and instructed the Secretary to convey their thanks to Mr. Lowey for his liberality and interest in the Society shewn in this matter.

The Hon. Treasurer ~~intimated~~ stated that a

letter dated February 27 had been received from Mr Donald Beith, intimating that as the Rooms now occupied by the Society were required for the accommodation of the Post Office, H.M. Board of Works expect that the Rooms in question shall be vacated by the Society at the end of six months from the date of the letter or not later than August 28, and requesting an answer undertaking on behalf of the Society to remove from the said Rooms at that date; also letters of similar purport dated March 6th and March 22nd.

No time was lost in taking steps to secure Rooms, but, as the intimation had been received a month after the usual time for such intimations being made, no little difficulty was felt in seeing suitable Rooms. Finally however suitable Rooms were seen in the Albert Buildings Shandwick Place, and after consulting with the Chairman, ~~Mr~~ and some other Members of Council, the following letter was sent to the Secretary of the Company who are the Proprietors ~~owning~~ the Albert Buildings:—

March 27, 1878.

Dear Sir

With reference to our conversation on Monday, I now offer on behalf of this Society to take the Rooms in the Albert Buildings specified in my letter to you of the 21st inst. on a lease of Five Years dating from Whitsunday next, at the Rent of £35 for the first and second years, £37 for the third and fourth years, and

£40 for the last Year of the lease, on the understanding that the Proprietors provide Grates for both Rooms and that the window in each Room can be drawn down from the top for ventilation.

I am

Yours faithfully

J. Sanderson

J. Turnbull Smith. Esq

To this Offer, a reply was received, ~~dated April 4~~, from Mr. Turnbull Smith, dated April 4, accepting it on behalf of the Company.

The agreement being virtually closed on March 25, a letter was written on that day to Mr. Beith, intimating that the Society would remove from the General Post Office Buildings before August 28th next.

On the formal completion of the agreement being effected, the Honorary Treasurer waited on Mr. Robertson of H. M. Board of Works and Mr. Cunynghame of the General Post Office, ~~and~~ to inform them that the Society would be prepared to remove sometime before August 28. On its being explained that the Society's Financial Year ends in the beginning of June, permission was at once granted to the Society to remain in the Post Office Buildings about ten days or a fortnight after the Term without any payment for Rent for these days.

A Letter, to Mr. Buchan from Mr. Scott of the Meteorological Office dated April 22, a reply thereto dated April 24th and another letter to Mr. Buchan from Mr. Scott dated were laid before the Council by Mr. Buchan

be considering it due to the Council to lay the correspondence before them before answering the last letter. As there was some doubt whether these letters were addressed to Mr. Buchan in his private capacity or as the Society's Secretary, the Council requested the Chairman to write Professor H. S. Stephen Smith for information ~~of~~ on this point.

~~On the motion of the chairman, the following were duly elected Members of the Society.~~

A conversation took place regarding the Parliamentary vote for purposes of Meteorology, as to whether any action should be taken in Parliament on behalf of the Society this year and if so what action. It was agreed to communicate with the Society's friends in Parliament, and it was remitted to the Honorary Secretary and the Honorary Treasurer to prepare a statement on the present position of this question.

On the motion of the Chairman, the following were duly elected Members of the Society:—

Life Members.

Professor Gairdner, Glasgow	£ 10..10..0
Robert Hunter, 10 Ainslie Place	10..10..0
David Jeffrey 14 Randolph Cr	10..10..0
D. Menzies. C.E. Architect 13 Young St	10..10..0

Annual Members

Dr A. P. Aitken, Chemist, &c	10..6
Dr A. Anderson, C.B. Sunnybrae, Pitlochry	1..0..0
W. G. Blackie, 17 Stanhope St. Glasgow	1..0..0

William Church, Jr. 67 St. Vincent Street, Glasgow,	£ – 10..0
William Collins Glasgow	1..1..0
Francis Douglas, M.D., Woodside, Kelso	10..6
Dr Finlayson, for Faculty of Phys and Surgeons Glasgow,	
Alexander Hamilton, Rozelle, Ayr	1..0..0
Dr Ed. Johnson, Rosemount, Kelso	10..0
William A. Keir Yr. of Kindrogan, Pitlochry	10..6
John Macgregor, Ladywell, Dunkeld	10..0
Alexander Mackenzie Elgin	10..0
J. G. Macmillan, Dereel Barn Park Ayr	1..0..0
Alexander Mitchell, Dalkeith	1..0..0
J. Forbes Mitchell of Thainston, Kintore	10..0
C. Morrison, of Islay, Bridgend	1..0..0
George Muirhead, Paxton	10..0
A. T. Niven, C.A., 6 Abbotsford Pl.	1..1..0
James Grant-Peterkin of Grange, Forres	1..1..0
Thomas G. Rylands, Highfield Thelwall	1..0..0
Miss Simpson, Selville, Portobello	10..6
D. Syme, Manager Lawson Seed & Nursery Co.	1..1..0
George A. Thoms, Sheriff of Orkney & Shetland	10..0
G. Thomson of Pitmeddan, Dyce	1..1..0
Andrew Tod, Mavisbank, Lasswade	1..0..0
James Wilson, W. Cowden, Dalkeith	1..0..0
Sir Geo. Udny Yule, C.B., K.C.S.I. Beech Hill, Haddington	10..0
Alexander Drew, Corsegaundarroch, Loch Long	1..0..0

Minutes of Meeting ~~held~~ of Council held in Society's Chambers, G.P.O. Buildings, on June 3, 1878.

Present Mr. D. Milne Home, Chairman
Prof. Crum Brown
Mr. T. Stevenson,
Dr. Sanderson,
Dr. A. Mitchell

Mr. Tennent and
Mr. Buchan
Apologies for absence were received from Professor Geikie, and Mr. R. M. Smith.
The Minutes of Meeting of May 14, were read and found correct.
Letters were read from Mr. Young, of the Scottish Salmon Fisheries dated April 5 and 8, 1878, ~~with reference~~ stating that he had communicated with Mr. Spencer ~~an~~ Walpole and the Stationery Office ~~with~~ with a view of ascertaining whether the Council could be supplied with 1000 copies for the Society's Journal of the ~~Chart an~~ Diagrams printed in the Herring Commissioners Report as part of the Evidence submitted to the Commission by the Society's Secretary. ~~Mr. Buchan was instructed.~~ The Council authorised the payment of the expense which might be incurred in obtaining these Diagrams if the Stationery Office should agree to furnish them to the Society.
A letter was read from Dr. Selby dated May 20, intimating that as he had left Kirkcowan he would not be able to continue to observe for the Society at that place. The Secretary was directed to thank Dr. Selby for the services he has rendered the Society as their Observer at Kirkcowan, and to write Mr. Hamilton of Craighlaw to whom the Instruments belong regarding a successor to Dr. Selby.
A letter was read from Mr. Livingston Public School, Fort William regarding the establishment of a Rain Station on the

top of Ben Nevis. The Chairman also stated that he had been in communication with ~~w~~ Mr. Livingston and others in the district, regarding the establishment of a complete Station on the top of Ben Nevis; and with regard to the same subject ~~that~~ had had some conversation and communications with Professor Stephen Smith, suggesting that the Meteorological Council vote the Society which might enable it together with contributions which might be expected from ~~the~~ local parties, to establish this important Station. He had however no answer from Professor Smith. The Council remitted the whole of this matter to Mr. Milne Home to arrange and report to a future Meeting.

A letter was read from M. F. Malmberg of the Stockholm Marine Meteorological Office, dated April 1878, proposing an exchange of Publications. The Council agreed to this proposal.

Mr. Buchan laid before the Council a correspondence which he had had with Professor Smith and Mr. Scott asking for information on the subject of Temperature charts, with the view of revising and republishing the Temperature Charts of the Society which have been published in their Journal. The subject is one which has occupied the special attention of the Society since its commencement, on the ~~sub~~ suggestion of the late Professor Fleming, then one of the Council. Since then it has been steadily pursued,

and more especially at present, the Meteorological Secretary is engaged in carrying out some suggestions made on this subject by two Members of Council. Information is further asked regarding a work on the Barometric Pressure of the British Islands on which Mr Buchan has been engaged for sometime under the direction of the Council.

Under these circumstances the Council are of opinion that the most suitable course would be for the Meteorological Council, if they see their way in the matter, to afford such assistance as they may see necessary to the Scottish Society, in carrying on and completing the above investigations on which they have been so long engaged.

Sent June 5 Mr Stevenson was requested to forward an ~~Copy~~ Excerpt of ~~this~~ the Minutes referring to this matter ~~to the~~ Meteorological Council.

The desirableness of a Grant from the Meteorological Council to the Society to aid in conducting their investigations into the Herring and Salmon Fisheries of Scotland was under consideration

The following were on the motion of the Chairman, ~~the following~~ were duly elected Members of the Society:—

Life Member

T. Sprowart of Broomhead, 7 Coates Crescent £10..10..0

Ordinary Members

T. S. Hunter, 113 West Regent St. Glasgow 1..1..0
John Laird, Port Glasgow 1..0..0
Walter McFarlane, 22 Park Circus, Glasgow 1..0..0

Alexander B. McGregor LLD. St Vincent Str.	Glasgow	£2"2"0
A. Erskine Muirhead, Crossmyloof	do	10"6
David Rankine, 75 W. Nile Street	do	10"0
William Skinner, Town Clerk	Edinburgh	1"0"0
Robert B. Smith, Benvue, Dowanhill	Glasgow	1"0"0
W. R. Tait, Thurso		10"0
Baillie Tawse, 49 Queen Street,	Edinburgh	1"0"0
Andrew Whitton, Couston, Newtyle		1"1"0

It was agreed that the Half Yearly General Meeting be held in the first week of July, and that the subjects to be brought before the Meeting be

1 Weather and Health of New York compared with London by Dr. Mitchell and Mr. Buchan,

and 2 The Influence of the physical configuration of the surface on the Seasonal Distribution of the Rainfall of Scotland

Minutes of Meeting of Council held in ~~Soc~~ 5 St Andrews Square, on July 5, 1878.

Present Mr. A. J. Adie, in the chair

Mr. Tennent,
Dr. Mitchell,
Dr. Sanderson,
Mr. Stevenson, and
Mr. Buchan

Apologies for absence were read from Mr. Milne Home, The Marquis of Tweeddale and Mr. R. M. Smith.

The Minutes of Meeting of June 3 were read and found correct.

A draft Report from the Council to the General Meeting was read and finally adjusted.

The Honorary Secretary intimated that he had, in terms of the remit made to him, forwarded on June 5, an application to the Meteorological Council for assistance in ~~carrying on~~ discussing the Atmospheric Pressure and Temperature observations referred to in the Minutes of the previous Meeting, but that no answer had yet been received.

The following were duly elected Members of the Society on the motion of the Chairman:—

Francis Cadell, Esq. Surgeon, 20 Castle Street
James A. Campbell, Esq of Stracathro, Brechin £2"2"0
Walter Douglas Irvine Esq of Grangemuir, Pittenweem £2"0"0
John E. Sibbald, Esq. 8 Ettrick Road

The Secretary intimated that H. M. Stationery Office had forwarded to the Society 1100 copies, being the number applied for, of the Diagrams illustrating the Herring Fishings ~~and~~ which it was intended to give in an early ~~next~~ Number of the Society's Journal.

Minutes of Meeting of Council of the Society held in the Society chambers, 6 Shandwick Place, on 8 October, 1878,

Present, Mr. Milne Home in the Chair;
Dr. Sanderson
Professor Crum Brown,
Mr. R. M. Smith, and
Mr. Buchan.

Apology for absence was received from Mr. Tennent.

The Minutes of Meeting of July 5th

were read and found correct.

The Council authorized the insertion of the following Papers in the forthcoming No. of the Society's Journal:—

1. Weather and Health of New York (U.S.), compared with London. By Alexander Buchan, F.R.S.E., Meteorological Secretary, and Arthur Mitchell, M.D., LL.D., F.R.S.E.
2. The Climate of Cyprus, from observations made by Thomas B. Sandwith, H.M. Vice-Consul, from October 1866 to June 1870. By Alexander Buchan, Meteorological Secretary.
3. Rain-Band Observations at Sea. By Charles D. Bell, F.R.S.E. Communicated by Professor Piazzi Smyth, Astronomer-Royal for Scotland.
4. Number of days each year, from 1857 to 1877, on which several of the more important Meteorological Phenomena were observed at Aberdeen. By Alexander Cruickshank, M.A.
5. Reports of the Half-Yearly General Meetings of the Society, held on February 21 and July 5, 1878.
6. Table of Observations c nnected with the Periodical Return of the Seasons for 1877.
7. Meteorological Register for Inveresk for 1877.
8. Meteorological Returns, with Notes of the Prevailing Weather and States of Vegetation, and Public Health, at the Society's Stations for the Half-year ending 30th June 1877.

It was agreed that the Report on the Herring Fishings of the six year 1873-78 will appear in next issue of the Journal.

It was agreed to sanction as regular Stations of the Society Gordon Castle, and Grange Hall, Forres. The Instruments being respectively furnished by the Society's President, The Duke of Richmond and Gordon, and J. Grant Peterkin Esq of Grange.

There was submitted to the Council by Sir John F. Clark a proposal for a pretty exhaustive investigation into the Climatology of Upper Dee Side, the plan proposed being that regular observations be made at eight stations in the District, viz, at Aboyne Castle, Glentanar, Dinnet Manse and Loanhead, together with Society's present Stations at Braemar, Ballater, Logie Coldstone, and Tillypronie. The Council very cordially approved of this proposal.

The Secretary intimated that Arthur Forbes Esq of Culloden, had present the Society with a complete set of Instruments for the Station

of the Highland Railway at Dalnaspidal which is about 1500 feet above the sea, and that the Instruments were placed in position and the observations commenced on 15th September last. The Secretary was instructed to convey to Mr Forbes the best thanks of the Society for this handsome and opportune gift, and for the valuable assistance he has rendered the Society in this matter.

Letters were read from Archibald Young Esq., one of the Scottish Salmon Commissioners with reference to the establishment of Stations by the Duke of Sutherland in several Rivers in Sutherlandshire, and in the Sea near their mouths, for the observation of Temperature by thermometers continuously immersed, for the purpose of ascertaining the cause or causes of the earliness or lateness of certain salmon Rivers. The Secretary stated that Mr Palmer had intimated to him that the Duke of Richmond and Gordon had resolved to establish similar Stations in the Spey and in the sea near its mouth. It was remitted to Mr Stevenson, honorary Secretary, and Mr Young to make the necessary arrangements for ~~these~~ Stations.

It was intimated that Captain Savile of the Intelligence Branch of Her Majesty's War Office, had asked for information regarding the Climate of Cyprus, that island having been one of the Climatological Stations of this Society for the four years ending 1870, the observations having been made by Mr Sandwith, then British Consul at Larnacha. In answer to this application, the Council had forwarded to the War Office a resumé of these four years' observations

together with a Proof of the Paper by Mr Buchan on the Climate of Cyprus, which has been incorporated in a work on Cyprus about to be published by the War Office.

The Secretary reported that he had during last summer inspected the Stations at Dalkeith, Stobo, Aberdeen, Dunn Castle, Logie-Coldstone, Loanhead, Tillypronie, Dinnet Manse, Glentanner, Aboyne Castle, Ballater, Braemar, Cluny Castle, Nairn, Achareidh, Bridgate, Elgin, Gordon Castle, Culloden, Lairg, Scourie, Invershin, Dunrobin, Pultney ~~House~~ Town, Holborn Lighthouse, Sandwick, Kirkwall, Tongue, Stornoway, Portree, Dalnaspidal and Loch Leven Sluice. In a few cases changes were recommended, but in general the Stations were in a very satisfactory state.

The Council desire to express regret at the death of one of their number, the late Admiral Sir William J Hope Johnstone K. C. B., and to record the great respect which they entertained for him on account of his distinguished services as a naval officer, his estimable general character, and the great interest he took in Meteorology. The Council remember with pleasure how regular was his attendance at the Society's Meetings, and how much the Council benefited by his knowledge, judgment, and experience. The Council beg to offer to the surviving members of the family an assurance of deep sympathy on account of the loss sustained by them, and request the Secretary to send a Copy of this Minute to Lady Hope Johnstone.

A Letter was read from the Meteorological Council dated 16th July 1878, with reference to the letter from the Council of June 5th which enclosed Excerpt from Minute of Meeting of 3rd June. In their letter the Meteorological Council request to know the terms on which the Society would furnish the Meteorological office with information as to temperature and pressure from any of the Society's Stations, whence mean values are not published in their Quarterly Returns, for the period 1860-70, - and would also communicate any corrections which may be needed in the published returns. After a good deal of conversation on the matter it was agreed to postpone sending ~~an answer~~ answer to this communication till a future meeting. ~~The Chair~~

The Chairman reported that he had ascended Ben Nevis with the view of ascertaining the practicability, ~~and~~ of establishing a Station on the Top of that Mountain, and had also made enquiries from the proprietors and other local parties for the same object, ~~and submitted~~ with the result that the proposal was quite a practicable one provided Funds were forthcoming to meet the expense of the building and pay the observers. In the mean time ~~it was resolved to request~~ the Chairman was requested to confer with Mr Stevenson as to the preparation of plans of the building and to remit these Plans to Fort William with the view of receiving offers from contractors.

On the Motion of the Chairman the following were elected members of the Society

Sir John Don Wauchope, Edmonstone House £1-1-0
John Smith 265 Union St. Aberdeen, 1-0-0

Arch Geikie Chairman of Meetg

Minutes of Meeting of Council held in 6 Shandwick Place on December 27, 1878.

Present, Professor Geikie in the chair,
Mr. Tennent
Dr. Sanderson
Dr. Robson Scott
Mr. Stevenson, and
Mr. Buchan.

Apologies for absence were received from Mr. Milne Home and Mr. Roll Smith.

The Minutes of Meeting of October 8, were read and found correct.

It was agreed to purchase a Portrait of the Society's President the Duke of Richmond and Gordon which has been published by Messrs. Morris, Walton & Co. London at 15/-

Mr Buchan reported that he had visited the Society's Stations at Ochtertyre, Crieff, Trinity Gask, Auchterarder, Glasgow, Paisley, Greenock and Wemyss Bay of which Reports would be submitted to a future Meeting of Council.

As regards the Stations at Trinity Gask, the observer would, on account of the state of his health, be no longer able to continue the observations.

Through the valued assistance of the Rev. Legh Campbell, one of the Society's

Members, a Station has been secured at Auchterarder, in ~~room~~ place of Trinity Gask, and ~~the~~ Dr. McGregor, Medical Superintendant of the Combination Poorhouse has agreed to make the observations. Mr. Legh Campbell has kindly sent a Cheque for £5"0"0 towards the purchase of instruments for the new Stations, which seem, ~~in~~ considering ~~tion~~ that the Society has an Barometer available ~~for this Station~~ will be sufficient for the equipment of the Station. The Secretary was requested to return the best thanks of the Council to the Rev. Legh Campbell for the assistance he has rendered the Society in this matter.

Mr Cunningham

Letters were read from Mr. J. Sands, Barbhead, Tranent, offering to make Observations for the Society in the Flannen Isles to the west of Lewis, or on Rockall, provided the Society agreed to erect a suitable Building and provide pecuniary assistance. The Council regret that owing to want of Funds they are not in a position to entertain the proposal, and request Professor

Geikie to communicate this decision to Mr. Sands.

The letter from the Meteorological Council of London, the decision regarding which was postponed from the previous Meeting of Council, was next considered, and after some conversation it was agreed to supply the information asked for, the terms being that this Council charge the Meteorological Council with ~~a sum equivalent to~~ the cost to the Society in paying Clerk's time occupied in furnishing ~~in copying out, and reducing when~~ ~~preparing~~ the information ~~so otherwise~~ ~~necessary, the mean values furnished~~ to the Meteorological Council. ~~No charge will be made for whatever direction and supervision~~ ~~A Telegram was read from Mr Milne~~ ~~may be required in preparing the information~~ ~~Home~~

Mr. Stevenson reported that Plans of the Building for the Station ~~of~~ on Ben Nevis had been prepared by him and forwarded to Mr. Livingston, Fort William, with whom they are lying for the inspection of contractors

A Telegram was read from Mr. Milne Home regarding an application by the Council for a Grant out of the Research Fund, and stated that he had forwarded by Rail a letter explanatory of his proposal. The Council had also under consideration a proposal to make application for a Grant of £100 out of the Royal Society £1000 Annual Research Fund to aid the Society in the Discussion of ~~the~~ Barometric Observations with a view to the construction of Isobaric charts of the British Islands. It was remitted to Professor Geikie, Mr.

Stevenson and Mr. Buchan to call a Meeting of Council after receipt of Mr. Milne Home's letter, for Monday next, or otherwise take what action might seem best in accordance with the views expressed by the Council.

On the Motion of the Chairman, the following was elected a Member of the Society:—

David Lumsden, Esq, Pitcairnfield, 20/-

Robson Scott
Chairman

Minutes of Meeting of Council held in Society's Chambers, 6 Shandwick Place, on December 30, 1878.

Present, Dr. Robson Scott in the Chair
Dr. Sanderson,
Mr. ~~R.~~ Tennent,
Mr. Stevenson, and
Mr. Buchan

Apologies for absence were received from Mr. Milne Home, Mr R. M. Smith, Professor Geikie, and Dr. Mitchell.

The Minutes of Meeting of December 27 were read and found correct.

The Council agreed to apply for, a ~~Grant~~ Grants of

stet AB

1st of £100 out of the Annual Parliamentary Grant of £1000 for the encouragement of original Research which is administered by the Royal Society of London ~~and~~ the Grant being in aid for the discussion of the Barometrical Observations of the British Isles with a view to the construction of Isobaric

Charts for these Islands, and
2nd. A Grant of £200 from the Annual Parliamentary Research Fund of £4000, for the Establishment of a Station on the Top of Ben Nevis - and with reference to this last Grant

resolved

That this Council make application for a Grant from the £4000 Government Research Fund.

The importance of Meteorological Stations in elevated situations is generally acknowledged. The Changes of Weather on the Earth's surface are believed, many of them, to commence first in the higher regions of the atmosphere. The Society has several Stations at heights upwards of 1000 feet above the Sea, which occassionally give earlier intimation of weather Changes than Stations in the Same district at lower levels.

Ascents in balloons have supplied very valuable information in certain large Enquiries but observations for a Satisfactory determination of the various Meteorological Vertical Gradients can evidently be obtained only at Stations of very ~~considerable~~ considerable elevations. Accordingly in America, France, Austria and Switzerland such high Stations have been sought for and established by the Governments of these Countries with important results

The Council of the Scottish Meteorological Society is desirous to establish a Meteorological Station on the top of Ben Nevis, the highest mountain in the United Kingdom, its height being 4406 feet.

A Plan for the necessary buildings has, at the

see letter Book
Sent

request of the Council, been kindly prepared by Mr Thomas Stevenson, Civil Engineer, the Society's Honorary Secretary. The Plan is now being submitted to Tradesmen, at Fort William, with the view of ascertaining the cost of erection. As yet it is hardly possible to estimate the cost of the buildings in a position so exposed and difficult of access. It may perhaps amount in all to £500 and the Instruments necessary for the observations will cost about £20. The Council however has no funds which can be applied for this object, and therefore craves from the Committee £200, or such other sum as they may think proper in aid of the establishment of the Station.

It is proper to mention that while this Council are desirous of affording every assistance in their power towards the establishment of this Station the fund required for the purpose must be obtained outside of the Society

Arch Geikie
Chairman of Meeting

Minutes of Meeting of Council held in Society's Chambers. On January 16th 1879

Present:- Professor Geikie, in the Chair
Dr Robson Scott
Dr Mitchell
Professor Crum Brown
Mr Tennant
Mr R. M. Smith
Mr Stevenson and
Mr Buchan

Apologies for absence were received from Sir Milne Home, Dr Sanderson and Professor Balfour.

The Minutes of Meeting of 30th Dec: 1878 were read and found correct.

A Letter was read from the London Meteorological Office, dated 6th Jan: 1879 conveying the thanks of the Meteorological Council to the Society in agreeing to supply the office in London with information asked for as to Temperature and Pressure from any of the Society's Stations whence mean values are not published in its Quarterly Returns for 1860–70 and for any corrections needed in published returns, referred to in Minutes of Meeting of 27th Dec: 1878.

Another letter was also read from the Meteorological Council, dated 6th Jan: 1879 with reference to the application which had been made by the Society for such assistance as might seem necessary to enable the Society to prepare the Physical Charts of Temperature and Pressure of the British Isles on which it has been so long engaged.

The Council after a full and careful consideration of the whole matter, agreed upon the following Minute, which the Hon: Secretary was requested to transmit:—

The Council of the Society, in making its application to the Meteorological Council, did not offer to co-operate with the Meteorological Council in ~~their Phy~~ proposed Physical Charts, but applied for pecuniary assistance from the ~~investe~~ Fund for special Researches placed at the disposal of the Meteorological

Council. The Society's Council believed that, in the disposal of this Fund, the same procedure would be followed as in the allocation of the Research Fund of the Royal Society, where a statement of the general nature of the investigation proposed — within defined limits as to cost — and the personal character of the applicant, are held to be sufficient.

It appears however from Mr Scott's letter that the Meteorological Council requires "to have laid before them the fullest details as to the exact scope of the plan intended to be pursued in Scotland". But as the Council of this Society understands from that letter that the expense of procuring all data, excepting what the Meteorological Office required for their form of Physical Charts must fall upon this Society, it seems ~~hardly~~ unnecessary to refer further to this branch of the subject.

The Society will be ready however to co-operate in carrying out the Investigations required by the Meteorological Office for their Physical Charts, and will, ~~be willing~~ on receiving the details of the investigations proposed, state the time and the cost that will be required for furnishing them.

sent on 17th

At this stage Dr Robson Scott ~~took~~ the Chair, Professor Geikie's professional duties calling him away. —

The Council resumed consideration of the application, resolved on at their Meeting of the 30th Dec. 1878, to be made to the Government Research Fund Committee

for a Grant of £200 to assist in the erection of a Meteorological Station on the top of Ben Nevis, and came to the opinion that the sum asked for should have been £400.

The sum of £200 represents merely the estimated cost of Materials, but does not include the cost of carrying these to the top of the Mountain, — an expense which from the character of the ascent will be very heavy. — together with the cost of erecting the Buildings.

As regards the sum required for payment of the Observers the Council hope to be able to raise it by special subscriptions in Scotland from parties who will be willing to aid in upholding the Station.

The Council ~~would~~ therefore hope that they will be allowed to correct the sum named in their application, by substituting £400 for £200; and if it be necessary to name some one who agrees to become responsible for the application of the Grant, they have to suggest Mr Thomas Stevenson C.E. the Society's Hon. Secretary.

Lent Oct 17 4

A letter was read from Mr W. Boyd, Peterhead dated ~~that~~ stating that the Harbour Trustees there had intimated to him that they intended to discontinue ~~the~~ giving 2/6 per week to the person who daily reads the self-registering thermometers continuously immersed in the sea. The Secretary was

instructed to communicate with Mr. Boyd as to what he would recommend to be done in the circumstances.

It was agreed on the motion of the Chairman to elect ~~that~~ the following as ~~be elected~~ Members of the Society

Sir J. W. P. Orde of Kilmory, Bart 21/-

& James Peddie, Esq, C.E. Albert Buildings 10/6

Dav^d Milne Home -

Minutes of Meeting of Council held at 10 York Place, on March 6, 1877.

Present Mr. D. Milne Home, Chairman
Professor Balfour
Dr. A. Mitchell
Dr. Robson Scott
Mr. R. Tennent.
Mr. R M Smith and
Mr. Buchan

Apologies for absence were received from Dr. Sanderson, Professor Crum Brown, and Mr. Stevenson.

The Minutes of Meeting of January 10, were read and found correct.

The Chairman read draft Report from Council to the General Meeting, together with a Memorandum, addressed to the Council ~~connected~~ explanatory of the recent applications by the Council for Grants ~~from the Government Research Fund~~, for the Ben Nevis Station and also for the discussion of Barometric observations for construction of Isobaric curves. It was agreed that a Meeting of Council be held immediately before the General Meeting for the final adjustment of the Report.

A letter was read from Mr. Scott

of the Meteorological Office dated February 1, 1879, enclosing Correspondence which has passed between the Foreign Office and the Meteorological Office relative to the proposed Meteorological Congress at Rome during April next. The Secretary was directed to acknowledge receipt of this letter.

The ~~following~~ gentlemen were, ~~duly~~ on the motion of the Chairman, duly elected Members of the Society:—

J. Y. Buchanan, Esq, 10 Moray Place,
Robert Douglas, Esq, Town Clerk, Berwick,
John S. L. Paulin, Esq, Quay Walls, do
John R. Thomson Esq, for the Bute Archaeological & Physical Society

Minutes of Meeting of Council held in 5 St Andrew's Square on March 7, 1879.

Present Mr. D. Milne Home in the chair
Dr. Mitchell,
Dr. Robson Scott,
Professor Balfour
Mr R. M. Smith
Mr. T. Stevenson
Mr. R. Tennant
Mr. Buchan.

Tennant

~~On~~ The Minutes of Meeting of the 6th curt. were read and found correct.

Apology for absence on account of illness was received from Dr. Sanderson.

On the motion of the Chairman, the Marquis of Tweeddale was elected a Member of the Society.

A Letter was read from the Marquis

of Tweeddale to Dr. Sanderson intimating his Lordship's readiness to act a Member of Council and the Secretary having stated that Dr. W. Robertson had also signified his readiness to act on the Council, it was agreed to submit these names to the Meeting for election as new Members of Council.

The draft Report from the Council to the General Meeting was thereafter read and agreed to.

Minutes of Meeting of Council held in 6 Sandwich Place on ~~4th~~ June 17, 1879, —

Present Dr. Mitchell in the chair
Dr. Sanderson, and
Mr. Buchan

Apologies for received from Dr. Robson Scott, Professor Balfour, Mr. Milne Home, Mr. Stevenson and Professor Crum Brown.

The Minutes of Meeting of March 7 were read and found correct.

It was resolved that the General Meeting be held some day from the 15th to ~~the~~ about the 20th prox, but not before the 15th; ~~and~~ it being remitted to the Chairman and Secretaries to fix the day which would be most convenient. The following subjects were agreed to be brought before the Meeting:—

Grounds Swells in Scotland, and
The Present Cold Weather, by the Secretary.

The Great Plague of London in relation to Weather by Dr. Arthur Mitchell.
The Secretary stated that he had seen Mr. Young, Scottish Salmon Fishery Commissioner, who had offered a Paper on the Salmon Disease. It was agreed that this form one of the subjects to be brought before the Meeting.
On the motion of the chairman James F. Pullar, Esq ~~Bankhead~~ Rosebank Perth was elected a Member of the Society 21/-

Minutes of Meeting of Council held held in 117 George Street on July 21. 1879. –
Present Mr D Milne Home in the chair,
" Robt Smith,
" R. Tennant,
Prof. Geikie,
Prof Balfour,
Dr. Mitchell, and
Mr. Buchan
Apologies for absence were received from Mr Stevenson and Dr. Robson Scott.
The Minutes of Meeting of June 17, 1879 were read and found correct.
A letter was read from Baillie Mc-Donald, Aberdeen, intimating his intention to observe for the Society at his House in Banchory Ternan, if it should be found suitable. The Secretary was directed to ~~make inquiries~~ see Baillie McDonald when in Aberdeen inspecting regarding the matter and report.

A letter was read from the Rev Dr. McVicar Moffat, dated July 9, stating that the Rev. H. Churchill who was about to open an Educational Establishment for preparing Boys to enter Fettes College had intimated to him his desire to observe for the Society at Ninian's, Moffat. The Secretary was instructed to correspond with Mr. Churchill as to the supply of Instruments &c and report.

A letter dated July 1879 was read from M. Mascart, Director of the Meteorological Service of France, asking for observations from 4 or 5 of the Society's Stations twice a day, viz at 12.43 p.m and 6 p.m Greenwich time, for the Study of the Atlantic and European Storms which the French Meteorological Office intended to take up. The Council agreed to supply this information so far as they could, viz by sending M. Mascart copies of such of the Observations made at four of the Society's Stations at 12.43 p.m for the American Government and to invite those of the Observers who might be willing to make an additional observation at 6 p.m for the French Office.

The ~~Council~~ Draft Report from the Council to the General Meeting was read and approved of.

The Council authorised the insertion of the following Papers in the forthcoming Journal:—

Field Stations visited St A.J.

1. The Great Plague of London in relation to Weather. By Arthur Mitchell, M.D., LL.D., F.R.S.E., and Alexander Buchan.

2. Report from the Herring Committee on the Herring Fishings of the Six Seasons, 1873–8, especially in relation to the variations of Temperature.

3. Temperature of the Sea at Peterhead each day of the year, ascertained by Registering Thermometers continuously immersed. By Alexander Buchan, F.R.S.E., Meteorological Secretary.

4. On the Connection between the severe Winter and Spring of 1878–9 and the Failure of the Spring Salmon Fishing in the Early Rivers. By Archibald Young, Advocate, Commissioner of Scottish Salmon Fisheries.

5. New Arrangements for Observations of Sea and River Temperatures with Thermometers continuously immersed. By Thomas Stevenson, Mem. Inst. Civil Engineers, F.R.S.E., F.G.S.

6. Effects of Land Drainage on the Productiveness of Salmon Rivers, with remarks on the Salmon Disease. By Archibald Young, Advocate, Commissioner of Scottish Salmon Fisheries.

7. On Observations relative to the Temperatures to which the Human Body is exposed. By Professor George Forbes, F.R.S.E., Glasgow.

8. Report of the Half-yearly General Meeting of the Society, held on 7th March 1879.

9. Meteorological Register of Inveresk for 1878.

10. Table of Additional Returns of Rainfall during 1877.

11. Meteorological Returns, with Notes of the Prevailing Weather and State of Vegetation and Public Health, at the Society's Stations for the Nine Months ending 31st March 1878.

The Secretary reported that in June last he had inspected the Society's Stations in Edinburgh, St Andrews, Dundee, Fingask Castle, Perth, and Auchterarden, when arrangements were made for the repainting the Thermometer Box at Edinburgh; the commencement of the observations at Auchterarden by Dr. McGregor some difficulties having been in the way; the sending of the St. Andrews Barometer to Edinburgh for repair; and the rectification of the Max. Ther at Fingask which had not been working correctly; but that otherwise everything was in excellent order at the Stations visited

Minutes of Meeting of Council held in 6 Shandwick Place, on November 17, 1879.

Present Mr Tennent in the chair,
Dr. Robson Scott,
Mr. Stevenson,
Dr. Mitchell and
Mr. Buchan

Apologies for absence were received

from Mr. Milne Home, Mr. R. M. Smith Dr. Sanderson, and Professor Crum Brown.

The Minutes of Meeting of July 21 were read and found correct.

It was intimated from Dr. Sanderson that as he intended to spend the winter in the south of Europe it would be necessary to appoint an interim Treasurer during his absence. Dr. Robson Scott having signified his readiness to act, ~~he~~ was appointed interim Treasurer.

A letter was read from Mr. William Boyd, Peterhead, dated Oct 24, intimating that the Harbour Trustees of Peterhead are not disposed to renew the subsidy to the Assistant for making the Sea observations and that the Thermometers for the Ugie observations were broken. The Council agreed to supply a new set of Thermometers with ~~the~~ Mr. Stevenson's Boxes recently described in the Journal for the Ugie Observations; but with regard to the Sea Observations at Peterhead, the Council regret that there are not Funds at their disposal to pay the Observer. ~~The Secretary was directed that in making these intimations to Mr. Boyd he inquire whether any thing~~

5 / AB

A Letter was read dated addressed to the President of the Scottish Meteorological Society from Mr. Thesen, President of an Association at Bergen for the progress of the Norwegian Fisheries. There was read also a Note by Mr Buchan on the Subject of this

Letter and a letter from Mr Milne Home dated 3rd inst

The Council deem it right to send these papers to His Grace the Duke of Richmond and Gordon, the letter from Bergen having been addressed to the President of the Society and to express a hope that His Grace will be good enough to forward these papers through the Norwegian Ambassador to the President of the Association at Bergen.

Mr Buchan submitted a report of this inspection of twenty-eight of the Society Stations - Aberdeen, Banchory, Gordon Castle, The Grange Culloden House, Dunrobin, Helmsdale, Sandwick, Kirkwall, Stornoway, Hoy Bridge, Fort William, Airds, Dunollie, Ardrishaig, (two stations) Callton-Mor, Kilmory, Achnaba, Barone Cottage, Mountstuart, Greenock, Glasgow, Lanark, Douglas Castle, Baronald, Dalkeith, Perth,

The Secretary intimated that Stevenson's Louvre boarded box had been obtained for Aberdeen and Ochtertyre;

that Mr Perry the Observer at Kirkwall having been unable to continue observing, he had with the assistance of Mr Cowan of Tankerness House secured the services of Mr Cursiter and had superintended the removal of the Instruments to their new position

that errors of the Barometers previously known to exist had been ascertained at the Stations at Airds, Greenock, Glasgow and Douglas Castle,

that the Barometer at Callton Mor supposed to be in error was found to be

correct the error therefore most probably is in the height above the sea which has hitherto been stated to be 65 feet and

That changes in the positions of raingauges, as at Kilmory, had been recommended and had since been made.

It was intimated that the observations made at Culloden are to cease in December next but that Mrs Forbes had handsomely ~~offered~~ offered to ~~prop~~ procure a complete set of instruments and present them to the Directors of the High School who have made arrangements for suitable positions for these instruments and for having the observations made under the direction of the mathematical master, Mr Wallace. The Secretary was directed to convey the very cordial thanks of the Society to Mrs Forbes for her handsome present of instruments for the equipment of the Society's new station at Inverness. ~~&~~

It was agreed to sanction new stations at Inverness, at Fort William and Port Patrick, the instruments for these two last stations being supplied respectively by Mr Livingston of the public schools Fort William and Dr Urquhart Kirkcudbright.

Mr Stevenson suggested that as on a former occasion Agricultural Statistics of the crops of 1879 should be collected with the view of shewing the connection of the Meteorology of the year and the crops and stated that Mr Menzies of the Highland and Agricultural Society had expressed his willingness to assist the Society in procuring these statistics from

correspondents in all parts of the Country
The Council agreed to carry out this suggestion and directed the Secretary to make the necessary arrangements in conjunction with Mr Menzies

The following Loans were intimated —
Culloden, Meteorological Register from 1841 to 1879
Meteorological Register from Glen Doich, Forfarshire, from Dr Benjamin Bell, 1785-1804
Dunstaffnage Meteorological Register from Colonel McDougall of Dunollie 1874 to 1879

For which the Secretary was directed to convey the best thanks of the Council.

Mr Buchan laid on the Table a ~~very valuable~~ Meteorological Register for Aberdeen of Observations from 1823 to 1841 which he had been asked to present to the Society by Dr Beverly at whose suggestion Professor Dickie had been induced to ~~make~~ hand over to the Society this very valuable Register kept so long by Mr George Innes F R S A. optician Aberdeen. The Secretary was instructed to convey the very cordial thanks of the Society to Professor Dickie and Dr Beverly for this important contribution to the Society's Records.

Mr Buchan stated while at Rothesay he had seen the extraordinary Meteorological Register which had been kept there for about 40 years

under the direction of the late Mr Thom of Ascog, — the Register containing Thermometric Observations made every hour of the night and day in an unbroken series for fully ~~30~~ 23 years. This Register was discovered when on the point of being carried off to be burned, by Mr Hay the Society's observer there and is now the property of the Bute Archaeological and Physical Society. The Council resolved to apply to the President of the Society for the loan of this valuable Register with a view to its discussion.

On the Motion of the Chairman the following gentlemen were elected:—

Dr Bryce, Collegiate School, Charlotte Sq. Moray Place	£ – 10.6
Dr Urquhart Kirkcudbright	
Dr Fraser 44 High Street Paisley	10.6
William Henderson, Cashier H. L. Bank	10.6
William Berridge 12 Victoria Loughborough	
Duncan Forbes of Culloden	1.0.0
George Greig, Uppat House Brora. Life	10.10.0

Alexander Crum Brown Chairman

Minutes of Meeting of Council held in 6 Chandwich Place, on December 26th ~~1880~~. (1879?)

Present:— Professor Crum Brown in the Chair
Dr Robson Scott
Mr Tennent and
Mr Buchan

Apology for absence received from Mr Milne

Home, Mr R. M. Smith and Dr Mitchell.

The Minutes of Meeting of November 17th were read and found correct.

The Council resolved ~~that~~ to apply for two Grants from the Government Research Fund Committee viz:—

1. Grant of £50 for averaging and discussing the Rothesay Meteorological Observations and

2. Grant of £100 to aid in the construction of Isobaric Charts for the British Islands.

Some conversation took place regarding the next Half-Yearly general Meeting and it was agreed that among the papers to be brought before the Meeting should be the Diurnal Periods of Thunderstorms in Scotland in connection with which the Secretary had been on the suggestion of Mr Stevenson for some time engaged extracting the observations of thunder and lightning from the observations of the Northern Lighthouses. ~~Dr Mitchell was requested~~ It was remitted to the Chairman and Secretaries to arrange the time and the subjects for the General Meeting.

It was agreed to sanction as new Stations Pitlochrie, Perth, & Balavan, Argyllshire,

Minute of Meeting of Council held in 6 Shandwick Place on March 9, 1880

Present Mr. Milne Home, Chairman
Dr. Robson Scott,
Mr. R. Tennent,
Professor Crum Brown, and
Mr. Buchan.

Apologies were received for absence from Professor Geikie and Mr. Stevenson.

The Minutes of Meeting of ~~November~~ December 26, 1879 were read and found correct.

The Secretary intimated that the Society's application for two Grants from the Government Research Fund of £4000 had been successful.

New Stations were sanctioned at Belvidere Glasgow, Kirkcudbright; and the Secretary was directed to correspond with Dr. Gordon the Manse, Birnie, with reference to the Station at Elgin, where the observations have ceased owing to the illness of Mr. Martin who has been observer there for 13 years; and Dr. McLachlan who has written the Council regarding the establishment of a Station at Tobermory.

An application was received from Mr. Harvie Brown, Dunipace House, asking the assistance of the Council with reference to the obtaining of observations from Faroë relative to the migration of Birds. The Secretary was instructed to write Dr. Emil Madsen, the Society's Observer at Thorshavn, soliciting his assistance on behalf of this important system of observation, in carrying out which many naturalists and several public bodies in this and other countries are rendering assistance.

A Table of mean Temperature of every

day of the year, which had been forwarded by Dr. Madsen, Thorshavn, calculated from all the observations made there, was laid on the table. The Council agreed that this short paper appear in the Journal.

The Report (in draft) from the Council to the General Meeting was read and considered, and it was agreed that the Council meet a quarter of an hour before the General Meeting to finally adjust it.

The following were on the motion of the Chairman elected Members of the Society:—

Robert Pullar Esq.	Perth	£ 1.1.0
David Smith, Esq. 10 Eton Terrace Edin.		1.0.0
Robert G. Wyld Esq. 19 Inverleith Row Edin.		1.0.0
John Murray Esq. 32 Queen Street Edin.		1.0.0
Arthur J. Walker Arnott Esq. 32 Danube St. Edin.		" "
Dr Argyll Robertson, 18 Charlotte Sqr. Edin.		10.0
Alexander Frazer Esq. 5 Elder St. Edin.		10.6
Edwin E. Glyde Esq. Kirkham, Babbacombe, Torquay		10.6
St John Vincent Day, Esq. C.E.	Glasgow	" "

Minute of Meeting of Council held in 117 George Street on 10th March 1880

Present Mr D. Milne Home Chairman
" Mr Tennent
" Dr Mitchell
" Dr Robson Scott
" Mr Stevenson and
Mr Buchan

Apologies were received from Rev. R. M. Smith and Professor Crum Brown

The Minutes of Meeting of 9th were read and found correct.

On the Motion of the Chairman Professor Fleeming Jenkin was elected a Member of the Society. ~~The Council agreed~~

The Council agreed to suggest for the approval of the General Meeting the re-election of Professor Dickson and Dr Robson-Scott as Members of Council and that in room of the late Mr Adie C.E. Professor Fleeming Jenkin be elected as Member of Council.

The Report of the Council to the General Meeting was adjusted.

The Subjects to be brought before the Meeting are

The Velocity of the Wind at different heights above the ground. By Thomas Stevenson, Hon. Sec.?

The Storm of 28th December 1879. By Alexander Buchan, Secretary

The Influence of the recent Fog on the Health of London. By Dr Arthur Mitchell

Thunderstorms in Scotland, their Diurnal Periods. By Alexander Buchan.

Minute of Meeting of Council held in Society's chambers, 6 Shandwick Place on May 27, 1880

Present Mr. Milne Home, chairman, & Mr Buchan

Apologies ~~were rec~~ for absence were received from Mr. R. M. Smith, Dr. Mitchell, Mr. Stevenson, Mr. Tennant and Dr. Robson Scott.

The Minutes of Meeting of March 10th were read and found correct.

A Letter was read from General Myer

Washington dated May 4, asking if the Council ~~Soci~~ would agree to change the hour of observation of the International observations made at four of the Society's Stations from 12h 43m pm to 0h 8m PM, or 35 minutes earlier, the request being made on the ground that the change would greatly facilitate the carrying out of this Service of Meteorology of the United States Government. The Council agreed ~~to carry~~ make the proposed change.

~~A letter was read from the International Committee on Meteorology, dated April 8, inviting the Council to~~ ~~send a participate in the~~ ~~send a delegate to a Conference to be held in Vienna.~~

A letter was read from the International Committee of Meteorology dated April 21st, intimating that, in terms of a resolution passed by the Meteorological Congress held at Rome in April 1879, arrangements had been made for making a comparison of the Standard Meteorological Instruments of the different Meteorological systems of Europe, and that the Council might have their Standards compared at the same time provided ~~that~~ they advanced a sum of 360 francs towards the expenses which will be incurred in carrying out this International comparison of Instruments. The Secretary was directed in replying to this communication to say that as the Society has no Funds which can be devoted to meet the expenses of the comparison of Standards, they are not in a

position to accept of this invitation on the part of the International Committee of Meteorology; but in connection with this matter it may be remarked that the Council have throughout adopted the Kew Standards.

A letter was read from Dr. Barry, Medical Officer of Health for Cyprus, dated April 27, 1880, inquiring if the Society would assist in the obtaining of proper climatological returns from Cyprus, by furnishing two Stations with the requisite instruments, viz Paphos and Kyrenia, in which case H. E. the High Commissioner would forward to the Society complete returns of all the Meteorological Observations made in Cyprus. The Council regretted their inability to comply with this request owing to the want of Funds, and in intimating this decision to Dr. Barry, the Secretary was desired to state, for the information of Dr. Barry, that when the Society established a Station there in 1866 the Council obtained by application, from the Government a set of the necessary Instruments which the Government conveyed to their destination.

The Secretary intimated that a new observer had been obtained for the Girvan Station, viz Mr. Peter Donald Gardener to Capt. Hamilton of Pinmore.

A Report was submitted by Mr. Buchan of his inspection in May of the Society's Stations at Thirlestane Castle, Bowhill, Galashiels, Springwood Park, Paxton House, Eyemouth, Blackadder, and Marchmont

the chief result being the ascertaining more exactly the errors of the Instruments, ~~and~~ the securing in two of the cases more accurate methods of observing, and the repair of one of the Barometers which had got out of order.

It was ~~arranged~~ agreed that the following appear in the forthcoming No of the Society's Journal:—

Climate of Uruguay, and the Pamperos of South America, by Dr Christison,
Mean Temperature of Faro, by Dr Emil Madsen
Temperature of the Leven water at Balloch Bridge; Daily Period of Thunderstorms; Great Frost of December 4th, 1879; and Tay Bridge Storm, by Mr Buchan
Results of Wind observations, by Mr Stevenson
Fog and Health of London, by Dr. Mitchell.

The following were duly elected Members of the Society:—

Francis C. Buchanan, Armadale Ho. Row, Helensburgh	£ 1.1.0
John A. Harvie-Brown, Dunipace Ho. Larbert	10.0
Sir Peter Coats, of Auchendrane, Ayr. Recommended by Dr Fraser, Paisley	" "
William Crabb. Silloth	
John Cay 10 Alva Street	10.0
J. J. K. Duncanson, M.D. 8 Torphichen Street	10.6
James Hope, D.K.S., Avenel. Colinton Rd	1.0.0
John Howkins, C.E., Queensberry Rd. Granton	1.1.0
W. R. McDiarmid, 8 Palmerston Pl	1.1.0
David MacRitchie C.A. 4 Archibald Pl.	1.1.0
G. A. Reid 22 Glover Street. Leith	1.0.0

Major Robertson, Strnan Cottage, Tillybody 10.0

Minutes of Meeting of Council held in Society's Chambers, 6 Alandwick Place, on July 7, 1880.

Present Professor Balfour in the chair
Mr. R. M. Smith,
Mr. Stevenson
Dr. Mitchell,
Dr. Sanderson, and
Mr. Buchan

Apology for absence was received from Mr. Tennent and Mr. Milne Home.

The Minutes of Meeting of May 27 were read and found correct.

It was agreed that the General Meeting be held on or about ~~[illegible]~~ Wednesday July 21, but it was remitted to Mr. ~~Stevenson~~ Milne Home, Mr. Stevenson, and Mr. Buchan to fix definitely the day. The Council agreed to request Sir Robert Christison to bring before the Meeting a proposed Inquiry by the Society into the relations of Climates in Scotland to the Growth of Trees. It was also agreed that a Paper by Dr. Mitchell and Mr. Buchan on the Relations of Weather to Deaths from Scarlet Fever and Whooping Cough in 31 British Large Towns be brought before the Meeting.

The Council considering the importance of Tyree as an observing Station directed Mr. Buchan to call on Mr. Duncan, Secretary to the Commissioners of Northern Lighthouses, with a view to ~~and~~ ascertain whether observations might not be made there by the Keepers of

the Lighthouse. In the event of a favourable answer being received it was agreed that the Council supply the required Instruments for the Observations.

A letter was read from Mr. E. Sang dated 29 May ~~June~~ 1880 informing the Council that a scheme was in contemplation to purchase No 5 and 6 Queen Street, or some other suitable property with the view of accommodating in ~~one~~ Building the whole of the Scientific and Learned Societies of Edinburgh, and submitting a Schedule of queries as to the extent of accommodation this Society would require, if they thought of joining in carrying out this proposal. The Council after carefully considering the matter resolved to ~~[illegible]~~ take no action in the matter, and instead of returning the schedule filled requested Mr. Buchan to see Mr. Sang personally and explain that the Council were not in a position to enter into this scheme, inasmuch as they had no Funds which could be put to such a use and they had a Lease of their present Chambers, three years of which lease being still to run.

Minute of Meeting of Council held in 117 George Street, on July 21, 1880.
Present Professor Geikie in the chair,
Dr. Sanderson
Mr. R. M. Smith, and
Mr. Buchan

Apologies for absence were received ~~from for~~ from Mr. Milne Home,

Mr. Tennant Dr Robson Scott, Professor Balfour, ~~Dr~~ Mitchell, and Mr. Stevenson.

The minutes of Meeting of July 7 were read and found correct.

The Report of the Council to be submitted to the General Meeting was adjusted.

With reference to the letter from Mr. E Tang dated May 29, the Council resolved to take no further action in the matter.

On the motion of the chairman Sir Archd. Campbell, Bart, 23 Moray Place was elected a Member of the Society (10/-)

David Milne Home

Ch.

Minute of Meeting of Council held in Society's Chambers, 6 Sandwich Place on January 14, 1881,

Present Mr. D. Milne Home in the Chair

Dr Sanderson

Mr. Tennant

Mr. Stevenson

Professor Geikie

Dr Robson Scott

Professor Balfour

Dr Mitchell

Prof Crum Brown

Mr. R. M. Smith, and

Mr. Buchan,

Sir Robert Christison, who happen to called, was invited to take part in the Meeting.

The Minutes of Meeting of July 21 were

read and found correct.

Letters were read from Mr. Anderson Smith ~~and~~ Honorary Secretary of the Hutchinson Memorial Committee, regarding the erection of a ~~Station on~~ Meteorological Observatory on the top of Ben Nevis; and letters from Mr. Wragge offering to make Observations on the top of Ben Nevis during next summer at 9 am daily whenever practicable on the condition of being furnished with apartments for himself and Assistant, a pony, and a complete set of Instruments to be read at the base of the hill simultaneously with those at the top. ~~After a lengthened conversation on the subject, a Committee was appointed to inquire into the whole matter and report, – the Committee being Mr. Stevenson (Convener) Mr. Milne Home, Professor Geikie, Dr. Sanderson, Dr. Mitchell, and Professor Crum Brown.~~

The Secretary was instructed to inquire regarding the practicability of daily ascending Ben Nevis, and regarding the expense of rooms for Mr. Wragge and Assistant

It was agreed that the General Meeting of the Society be held some time in the end February, and that the subjects to be brought before the Meeting be

The Meteorology of Rothesay and

The Atmospheric Pressure of the British Islands, by the Secretary, and the Secretary was instructed to write Mr. John Aitken, Darroch, and invite him in name of the Council to bring before the Meeting, the subject of Dust

Mists and Fogs.
Sir Robert Christison submitted a proposed Schedule for the use of the observers who may agree to make observations annually on the girth of forest trees. The Secretary was instructed to have the Schedule printed. ~~and~~

It was reported that separate copies of Mr. Buchan's Papers on the Tay Bridge Storm, and Thunderstorms of Scotland had been ~~thrown~~ printed off and sent to the Keepers of the Northern Lighthouses in consideration of the valuable services they make to the Society as observers of these and other Meteorological phenomena,

That on invitation, several contributions had been sent to the Naval and Marine Exhibition in Glasgow.

A letter from Mr. Duncan, dated Sept 2, was read intimating

That the Commissioners of the Northern Lighthouses had agreed to the establishment of a Station on Tyree, the Observations there being to be made by the Keepers, on shore, of Skerryvore Lighthouse.

As regards Stations, that in place of Kirkpatrick Juxta, which had ceased, Dr. W. D. Grange of Moffat had agreed to observe at Moffat, the Instruments formerly used at Kirkpatrick Juxta being handed over to him.

That Instruments had been procured by Mr. Lawrence Pullar, Bridge of Allan, and by Messrs W. Denny and Bros. Dumbarton

which places it was agreed to sanction as Stations.

The Secretary laid on the table his Reports of the following Stations visited by him during the summer:— Aberdeen, Banchory, Peterhead, Old Deer Inverugie, Buchanness Lighthouse, Lairg, Dunrobin Castle, Kirkwall, Sandwick Inver-shin, Loch Inver, Stornoway, Portree Dunvegan, ~~Sligh~~, Sligachan, Gairloch, Auchnasheen, Gordon Castle, Culloden, Inverness Sound of Mull, Ardrishaig, Glasgow, Leith and Perth.

The following gentlemen were on the motion of the Chairman elected Members:—

Professor Blackburn, Roshven, Fort William	£1-1-0
James Crichton, 41 George St.	10-6
William Denny & Brothers, Leven Ship Yard, Dumbarton	2..0..0
A. M. Duff, 26 Minto Street	" "
Allan Freer Melrose	1.1-0
George Maxwell of Glenlee, New Galloway	" "
C. H. Renshaw, of Glen Patrick Paisley	" "
George Waterston, 36 N. Hanover St.	10-6

Life Members

William Macdougall, ~~Brod~~castle	10-10-0

David Milne Home
(Chairman)

Minutes of A Meeting of Council held in Society's Chambers, 6 Sandwich Place, on February 24. 1881.

Present Mr Milne Home in the chair
Mr. Stevenson
Dr Robson Scott,
Mr. Tennent
Professor Geikie

Dr. Sanderson
Dr. Mitchell, and
Mr. Buchan

Apologies for absence were received from Professor Balfour, Mr. R. M. Smith, and Professor Dickson.

The Minutes of Meeting of January 14 were read and confirmed.

A letter was read from the Italian Meteorological Society to the President intimating the formation of this new Society in Italy and proposing an Exchange of Publications. Agreed to.

A letter ~~from~~ was read from Messrs John Hopkinson and H. G. Fordham asking the Society to take part in a Conference of Delegates of Scientific Societies to the next Meeting of the British Association to be held at York. It was resolved to decline.

The Secretary intimated that the Observations which had ceased at Balloch Castle were again resumed; that owing to the serious illness of Mr. Dunlop, the observations at Nottman-hill, Kilmarnock, had ceased; that ~~the~~ observations would soon be resumed at Elgin, in connection with the Lunatic Asylum there. It was agreed to hand over the Society's Instruments formerly in use at South Cairn, Wigtownshire by the late Mr. Kennedy, to the Rev Mr Paton, Soulseat, near Castle Kennedy, who had offered to observe there.

Letters with reference to the Station at Ben Nevis from Mr. Anderson Smith, February 4, 8, and 21, and the Committee appointed at last Meeting ~~having~~ reported the result of their Meeting with Mr. A. Smith on January 28. The Council after some conversation on the subject agreed to the following resolution; and requested the Hon. Secretary to write Mr. A. Smith in terms thereof:—

If the Hutchinson Memorial Committee hands over to the ~~Roy~~ Scottish Meteorological Society a properly built and equipped Station on the top of Ben Nevis, the Council shall accept the same as a portion of their system and work it as if it were their own. In that case it will be clearly understood that the maintenance of such a Station is beyond the Funds of the Society, and that the expense would have to be met from other sources. The Council has been promised £100 a year from the Meteorological Council for this Station and as the cost will be considerably greater than that sum, the Council shall apply to Government for additional assistance and make any other effort that may be desirable and they quite believe that the Station on Ben Nevis will be properly maintained, — an object which the Society has very deeply at heart.

A correspondence was also read with regard to accommodation for Mr. Wragge during the time he would make the observations on Ben Nevis next summer, and the Secretary was directed to make further inquiries.

On the motion of the Chairman the following gentlemen were elected Members of the Society:—

R C Reid, C.E. 72 George St } 10/6
Alexander Leslie, C.E. do. 10/6

Minutes of Meeting of Council, held in Royal Hotel, Princes Street on 25 Feby 1881.

Present:—Mr Milne Home in the Chair
Dr Sanderson
" Robson Scott
Mr Tennent and
" Mr Buchan

Apologies for absence were received from Professor Geikie, Professor Balfour, Mr R. M Smith and Dr Mitchell.

The Minutes of Meeting of 24th February were read and found correct.

The Council agreed to suggest for the approval of the General Meeting the re-election as Members of Council of Mr R. M. Smith and Professor Balfour and that, in room of the Marquis of Tweeddale, Sir Robert Christison be elected

The Report to the General Meeting was adjusted.

The Subjects to be brought before the Meeting are

The Meteorology of Rothesay. By Alexander Buchan Secretary
The Atmospheric Pressure of the British Islands. By Mr Buchan.

A. Christison
Ch.

Minutes of Meeting of Council held in 84 George Street, on March 23. 1881.
Present Sir Robert Christison in the Chair
Professor Geikie
Mr. Stevenson
Dr. Sanderson
Mr. Tennent
Mr. R. M. Smith and
Mr. Buchan

Apologies for absence were received from Mr. Milne Home and Dr. Mitchell.

The Minutes of Meeting of February 25 were read and confirmed.

A letter was from Mr Wragge, dated March 4, regarding accommodation near Ben Nevis and the observations proposed to be made there during the coming summer. The Council agreed to supply to Mr. Wragge during the time the observations are made two or three Rooms, as may be required, rent free, and the use of a pony. As regards a Tent, the Secretary was directed to enquire ~~at~~ if in his altered circumstances a tent would be required, in which case the Council proposed to apply to the War Office for the use of one. The Secretary was directed also to say to Mr. Wragge that while the Council desire to have the

Alexander Buchan

observations made at 9 a.m., yet considering the difficulty of the ascent of the mountain and the uncertainty as to the time that may be required, any suggestion he may have to make as to the desirableness of observing at 10 a.m. will receive every consideration, and further that the times (months) of beginning and ending the observations be equally open to revision.

In a conversation which ensued regarding the making of the Observations when the proposed observatory is built on the top of Ben Nevis, it was suggested that the Government might be applied to to grant the services of three men, ~~f~~ through the War Office, as an observing staff; and in connection therewith, Mr Buchan was requested, when in London, to wait on the Duke of Richmond and Gordon, the Society's President, Professor H J. Stephen Smith, Mr Spottiswoode, and several others who might be able to aid the Society in its application to Government for an observing Staff.

A letter was read from Dr. Fraser, Paisley, dated March 17, stating that he had seen Sir Peter Coats regarding the establishing of a Station in Ayrshire and that Sir Peter had agreed to establish a Station at Auchendrane.

On the motion of the Chairman, Alexander Gourlay, Esq, Airlie Lodge, Broughty Ferry, ~~he~~ was elected a Member of the Society.

The Council agreed to order 20 measuring Tapes for the use of ~~those~~

Observers who might make observations
~~of~~ annually, of the girth of trees, and
at the request of the Council Sir
Robert agreed to order them and
see that they were made properly.

David Milne Home
Ch.

This Meeting having had ~~laid before it~~ explained to it, a scheme proposed by Commodore Maury of America, for obtaining simultaneous ~~accurate~~ reports, from all countries, of the state of growing crops, and also of the weather in the districts where these crops are growing, so as to warrant correct estimates of these crops, as regards both quantity & quality; & having learnt, that an influential Agricultural Society in America, has approved of the scheme, and applied to the United States Government to carry it out, and to invite the cooperation of ~~other~~ the Governments of other countries, ~~in~~ agree to express a general approval of the scheme, and to remit to the Council to make a favourable answer to Commodore Maury's communication

ADDRESS AND RESOLUTIONS

BY

COMMODORE M. F. MAURY,

AND READ BEFORE THE

Rockbridge Agricultural & Mechanical Society

By DR. R. L. MADISON,

OF THE VA. MILITARY INSTITUTE,

October 13th, 1871.

Resolved, 1st. That the President of this Society be, and is, hereby instructed to petition in behalf of the farmers of Virginia, the U. S. Government through the State Department and the Executive in favor of the establishment by international co-operation of a general and systematic plan of meteorological observations and crop reports; and to request the Government, in furtherance of this object, to invite the other nations to meet in the perday in conference similar to that of Brussels in 1853: First, for the purpose of connecting with the plan now proposed, the system that was then devised for the sea: Second, for the purpose of arranging details; and third, for the purpose also of providing for a general system of telegraphic meteorology, and crop reports, to the end that our knowledge of the laws which control the functions of the atmosphere may be increased, and that accurate and useful forecasts may be made at frequent intervals as to weather and crops in all countries. And the President of this Society is desired also to request that the U. S. Government will co-operate in this system of research by causing the plan that may be rgreed upon in Conference, to be carried out in this country, and to be adopted on board of the national cruisers.

Resolved, 2nd, That the President of this Society transmit a copy of these resolutions to the State Governor, and to each of the Agricultural Societies and Journals in the State, nviting their co-operation and requesting them to support this measure with their influence, and with similar petitions.

ADDRESS.

The farmer sows in faith; But whether he shall reap in plenty, or glean in famine, depends, as you know, chiefly upon the season.

I am not fond enough to suppose, nor do I mean to convey to you the idea, that the conference to which these resolutions point, is to devise any system of physical research, which will enable meteorologists to regulate the seasons. But I *do* mean to convey the impression to your mind—because the conviction is strong upon my own—that if the object of these resolutions be carried out, the result will be far more beneficial to you than any which could possibly flow from human power over the seasons.

Let us illustrate this, so that we may make it plain as we go: Some farmers grow wheat. Let us take such an one for illustration, and follow him from seed time to harvest. He has been up early and late.—He has worked hard. —His grain is harvested and housed: its already for sale: he wants a little money, and goes to town to enquire the price of wheat of the men who want to buy.

Now in doing this, he is reversing the general order of business at once:—Usually the buyer asks the seller the price of his wares. But with regard to all of the chief agricultural staples, the producer knows so little about the yield in competing States and countries, that he is compelled to go and ask the buyers about it, and request them to fix the price. What would you think if your neighbor, who, wishing to sell a horse, should go to the man who wants to buy, and ask him to fix the value and set the price? Yet this is exactly what you do with your cotton and grain, rice, sugar and tobacco and all of your staple production. To relieve you from this, and to put you on a footing with the factor in knowledge as to the yield of the crop every where, is exactly what these resolutions aim to do.

But let us follow our grain grower to town, and see what occurs: The factor tells him wheat is low. "How is that?" he asks, "the "season has been very unfavorable, and nobody "in my part of the country has made half a "crop: grain is scarce and ought to be high." "Ah!" the reply may be, "the crop in the "Northern States—in Ohio, Minnesota and "other Valley States—has been very large: "corn is so cheap there, that they are using it "for fuel. It will be brought down here by "rail and water fast enough, and the local "scarcity will soon be rectified."

"But mine is Tennessee wheat: it is almost "as flinty as the maccaroni wheat of Califor-"nia, and bears sea transportation nearly as "well. I dont want to sell it here: I want it "shipped to England:—how much will you "allow on it?"

"If I do that," the factor may rejoin, "you "must be prepared to allow a very large mar-"gin, for there has been a tremendous crop in "the Valley of the Danube, and the Basin of "the Black Sea, which you know are said to "be the graineries of Europe."

Thus you see prices are regulated not by the yield in Tennessee or Minnesota, but by the yield in all parts of the world, both at home and abroad, whence wheat is sent to market to compete with that which is sent forward from here.

But our farmer pushes his enquiries, and learns that the factor gets his information as to the large crop in Europe, from estimates of the grain dealers in New York and London, who in turn, base their calculations upon such information as they have been able to "pick up" from the Black Sea:—and it is surprising to see how accurate this information sometimes is, though it is often wide of the mark as all of you know to your cost: for it not unfrequently happens that by Fall and Winter, when the crop has nearly all gone forward and left the hands of the producers, the discovery is made that the crop, both in the Upper Mississippi Valley, and in the Black Sea country, has fallen far short of the estimates. Then prices go up:—sometimes the rise is as much as a dollar a bushel; and as a rule this rise comes too late to do you any good. The middle-men usually get the benefit of it at the expense of the producer on one hand and of the consumer on the other.

Now I cannot keep it too prominently before you, that the object of these resolutions is to give you, as well as the merchant, as accurate and familiar information as to the yield of the crop in every part of the United States, in England, the basin of the Black Sea, Egypt and the Danube, as you have it in your own neighborhood.

Like mistakes as to yield happen with tobacco, sugar, rice, hemp and all the agricultural staples of commerce. They are of annual occurrence. How should it be otherwise? seeing the information is so one-sided. It is collected by the buyer of course in his own interest—for by it he sets prices.

This information ought to be collected by Government, and be in the interests of truth and science, and therefore impartial.

The relation between buyer and seller are antagonistic, in-so-far as one wants to buy low, and the other to sell high. For the lack of just such a system of co-operation and research as I propose, it continually happens, that the [illegible] who knows nothing as to the commercial wants of the world for his staple, has to sell at prices that are based upon estimates which dealers—not producers—form as to the extent of the crop—not in our land but in all lands from which commerce draws her supplies.

Did it ever occur to you to enquire what these estimates are based upon, by which year after year, you cast away the hard earned fruits of your labor, of your sweat, and your toil? Why my friends, they are based upon data the most slender. As an example let me quote from the City Article of the London Times, which reached me as I was preparing this address. That paper, you know, devotes daily neariy half a broadside to matters of finance, trade and commerce, and the No. before me contains a long letter from a Mark Lane correspondent "on the present condition of the Grain Trade and the prospects of the approaching harvest in England. This dealer looks to me like a merchont who wants to buy, and would therefore like to see prices a little lower. At any rate, he states that the bulk of grain and flour on hand was then about 10 million bushels and prices ruled high: that there was a fleet of 411 grain laden ships then at sea and all bound for England:—That the Maize market was in a feverish state owing to the uncertainty as to the extent of supplies from this country—: and then, with the assistance of the "Harvest Journal," he attempts to forecast the English crop of '71. The Harvest Journal forecasts from such information as it can pick up from farmers; and Mr. Kaenis Jackson, the Times Correspondent—supplements it with his own observations made during *a tramp of ten miles* in the country. Now mind you: here is not an expert: not a farmer: but a city merchant—who from interested motives perhaps, but at any rate from observations wholy insufficient, undertaking to forecast the wheat crop of all England, and publishing his predictions where they are liable to influence prices even here.

Now suppose you were to see a man, after "a tramp of ten miles in the country" from Lexington, pretending to forecast the corn crop of Virginia and Kentucky—for these iwo States are not much larger than England.— What would you think of his accuracy?— Would you like to depend upon such figures for the price you are to get?

Well, let us look at the cockney's ear marks for a crop:—He argues in favor of a good crop from the stiffness of the stem, the shortness of the straw, and the compactness of the ear and color, in connection with what he had heard a farmer say the day before who "had two stacks of different harvests, "one a large, the other "relatively a small stack—the latter produced "135—the other only 70 quarters."

From such sources of information as this, forecasts are made concerning all the staple crops upon which the husbandmon expends his labor:—upon such forecasts, prices are fixed and the producers have to take what they can get:—and upon such sources of information you now depend for the price you are to get for all your crops that are standing in the fields or gathered in your barns. This is good for the speculators, many of whom annually make far more out of your crops than you do yourselves.

This letter—not because we know anything of Kœnis Jackson the writer, or of the newspaper called the "Harvest Journal;" but because Sampson, who writes the money articles for the *Times*, takes it up, endorses it and publishes it in that journal,—is read and its purport retailed upon all the Corn Exchanges of the country and prices influenced accordingly.

These Mark-lane estimates were in the beginning of August, when American wheat was just beginning to go forward, and when it had to encounter the cargoes of 411 grain-laden ships already on their way to a market stocked with 10,000,000 bushels of wheat, and backed by the buyer's estimate of a most abundant harvest. Of course prices ruled low; and now, when many of you have sold, what has become of that abundant English harvest?

Mr. Lewis, one of the great authorities there now comes out with an estimate, showing that the present crop in England *will* fall short of English consumption at least 11½ millions of quarters, which, at 60 shillings—present prices—is worth upwards of $170,000,000.

An English paper, while confessing that this short crop is to tell fearfully upon the social history of the year,—for a short harvest always lowers the marriage rate there, and checks increase of population—finds consolation in the reflection that John Bull's granaries will be surely replenished from abroad. "Corn," it says, "will come to us from the prairies of Illinois and Iowa, from Russian steppes and Tartar river banks, from Baltic and Black Sea granaries, from San Francisco and places more distant still."

How are crops in those distant countries, we know not. Still, the price American grain is to fetch in England is to be governed by the yield in those countries.

We know already that the crop in France is short. Now suppose American grain-growers had been possessed of this information two months ago, and these resolutions, had they been in operation, would have given it.

What would it have been worth to the country? Something like 20 cents on every bushel of wheat that has been sold between July and October.*

Now, remember, that Agriculture is the great source and fountain of prosperity, wealth and power of this country and the world.— That, weighed with it, mining and manufacturing, fishing and sea-faring, navigation and commerce, are but as straws in the ballance. Calculate and see what vast sums of money your Government is, aad has been expending for generations, in the shape of duties and tariffs and protection, direct and indirect, for the benefit and encouragement of those industries, and how little for yours.

Surely, considering the progress that has [illegible] physical research and scientific discovery, it is not much out of the way to ask the Government so to direct these discoveries and researches so to encourage them, that you too, in your husbandry, may have the benefit of them.

The cost will be trifling: the machinery for carrying out this plan is already provided in most of the States of Christendom, and it only requires to be geared together and put into operation. The wires of the telegraph lead all over the world. Their total length at present is nearly a million of miles, and it is increasing at the rate of 100,000 miles a year. In all countries there are Meteorologists with their systems and plans for observing and discussing the movements of the atmosphere: and such countries have their Agricultural Aureaux or other offices, where information is sought and disseminated touching the soil, crops, and cultivation. And all that is needed is to bring these meteorologists, offices, implements, and means together in a spirit of friendly concert, &c., conferring the greatest boon that agriculture has received since this Continent gave it Indian corn, the potato, and tobacco, will be conferred upon those who earn bread in the sweat of their brow.

What gentlemen do these resolutions propose that you should ask? Simply that the Government will use its friendly influence— not its money: but its good offices, with other nations for the advancement of science and the special benefit of all those everywhere, who till the earth.

In 1853, I obtained leave to invite the farmers of Europe to send their men of science and leading meteorologists to meet me in conference at Brussels, that we might there take counsel together and devise a uniform system of co-operation and research at sea. The invitation was promptly accepted, the conference met, a plan was agreed upon, and immediately ships of all kinds were, without the cost of one cent, converted into floating observatories. They were to be found day and night in all parts of the navigable world, observing and recording the phenomena of sea and air according to the plan we had in conference devised. Other nations established Bureau to engage in the work of discussion and co-operation with us. What was the result? Why a harvest as rich with love "as is the bottom of the sea with sunless treasures." The voyage from this country to Brazil was shortened 20 days; to other countries it was shortened 30 days; to others 40, 50, and even 60 days. Navigation was rendered more safe; the dangers of the sea were lessened, and millions, not only of dollars, but of pounds sterling, saved to commerce annually in the shortening of voyages and the saving of time; and the commerce of the world is for all ages and without let or hindrance to enjoy these benefits and blessings.

Nor is this all: a new department of science named by Humboldt the "Physical Geography of the Sea," grew out of these researches. They led to the discovery of the telegraphic plateau which led to the laying of the Atlantic cable. With it also I introduced a system of deep sea soundings which has excited such a lively interest in the minds of philosophers throughout Europe touching the Physics of the Sea, that nation after nation has, since I left the Observatory at Washington, taken up the broken threads of my researches and carried them on separately, and with such success that now Meteorologists there tell us, that under the impulse given by the Brussels Conference, their science has made more progress than it had done in all time before.

I proposed then to include in that system the land also, and to do for agriculture then what I was doing for commerce, and what by these resolutions we seek to accomplish now. The Royal Society of London advised against it. Through deference to their opinion, I abandoned the land portion of the plan. It was postponed—not given up at the Brussels Conference; and that it was postponed, has been with me the source of a standing regret ever since, for I afterwards learned that the leading meteorologists of Europe and all the Governments with the single exception, perhaps, of little Bavaria, were heartily with me.

Thus, alone, and at an expense not exceeding $1,000, if I accurately remember, I got together the conference of Meteorologists at Brussels, and brought under one comprehensive and co-operative plan of physical research, more than two-thirds of the earth's surface. Surely, your Government, backed by all the moral weight and influence of the country can bring the remainder under this system, and by so doing confer upcd agriculture, commerce, and the industries of the country a boon such as they have never received,—no, not since you have knocked off poling up the Mississippi.

But to return to the present place of collecting that sort of information by which the price of your crops is determined. In order that you may fully understand the defect of the present system and fairly comprehend the benefits that are to be expected from the plan proposed, let us see how the data are now collected for forecasting the crops in this country. One or more houses in New York will issue circular letters from time to time, telling of the promise and forecasting the yield of the crops. This is done from data the most scant, but from the best that is to be had. Some rely on the merchants in the Interior towns and cities for their information; and some on newspaper reports and some will send agents to ride over a few plantations "taking a tramp of ten miles," and from data thus collected, the crops are forecast.

As a rule, these aim at accuracy; but we cannot forget that there is the principle of antagonism between the factors who buy and forward, and the farmers who grow and sell the crops. And I fancy that generally—not always, but frequently—the crop as it begins to come forward, is over-estimated; and as a rule these errors in estimates are not detected until the crop has left the hands of the producers and entered the channels of commerce. The discovery is then too late to do you any good.

Perhaps I can bring this home to you more clearly and closely If I draw my statistics from cotton: though facts would be as telling to those engaged in other specialties, if I were to draw them from corn, tobacco, sugar, coffee, fruits and wine, hemp, rice, or any of the other great agricultural staples of commerce.

Let us see some of the over-estimates that have been made in cotton during the last generation.

Here is a table which I got from one of the first authorities in the land.*

The cotton crop after it had all gone forward, and had been delivered for shipment was found to fall below the estimates in the following named years, as follows, viz: The real crop of

1823	fell	below	the	estimated	crop	25	per ct.
1838	"	"	"	"	"	24½	"
1840	"	"	"	"	"	25	"
1843	"	"	"	"	"	15	"
1846	"	"	"	"	"	15¾	"
1849	"	"	"	"	"	23¼	"
1856	"	"	"	"	"	18	"
1860	"	"	"	"	"	21¾	"

Average 21¾.

These are not all the erroneous estimates that occurred during this period of 34 years. They are only extreme cases; but they show that on the average, every fourth crop is over-estimated to the extent of more than one-fifth.

In other words—and I wish you to mark this fact—that through lack of what these resolutions seek to accomplish for you, you lost during those 34 years, one entire crop and three-fourths of another; that is, you gave it away. For in the above named eight years, you sold each crop on the assumption that it was one-fifth larger than it really was; and therefore you got for it one-fifth less than it really was worth.

This I believe is the way cotton planters generally would put the case. It may not be quite the true way, but it will answer for the purpose of illustration, and serve to show— though it may give figures that are too large— that the sum total which you lose through erroneous forecasts amounts annually, on the average to millions of dollars. Illustration, with example, will make this clearer: A crop while coming forward is, let us suppose, estimated at 4,000,000 of bales, and the word is passed across the ocean and circulated in all the cotton marts of the world, that the American crop is enormous and prices are pitched accordingly. You sell, suppose at 16 cts.; but by the time most of you have sold at these figures, and before much of the crop has gone into consumption—though most of it has gone forward—it is discovered that the crop is but 3,000,000 bales, and up goes the price to 20 cents. Now if you had had the means of correct estimates, and if the crop had been correctly forecast at 3,000,000 you would have sold perhaps for 20 cents instead of 16 cents.

The fluctuations in commerce, the loss to producers and the expense entailed upon consumers, are far greater and more grievous than tnose who have not studied this subject, are aware of. It extends to all your articles of export.

I estimate that the cotton planters alone of the South, have from such fluctuations during the last six yesrs, only lost the lions share of $375,000,000. That is in consequence of erroneous estimates, and the lack of such authentic crop statistics as we now seek, the planters have received for their last six crops several hundred millions of dollars less than they would have received, had they known before selling, the actual amount of the crops, as accurately as it was known after they were sold.

Our total cotton production since the war is in round numbers 16 millions of bales, and the fluctuations in price are owing chiefly to the lack of correct information as to yield. Supposing planters to have sold on the average, only half the crop of each year at the lowest figures:—then according to this way of putting the question, they have lost on the crop of 1865,—$96 millions: on the crop of 1866, $44 millions: 1867, $67 millions: 1868, $80 millions: 1869, $68 millions: and on the crop of 1870, $70 millions: total $375 millions, on an average of $62,500,000 per crop.

It is useless for me to go back to refresh your minds upon this subject: you remember that last January, cotton went down to 12–13 cts. and at that price many of you parted with your crops: and that before the present crop began to come forward, prices ranged from 19–20 cts.: and you remember that likewise in the winter of a year or two previaus when you were parting with your cotton it went down to 9–10 cts., and that then afcer it had got fairly out of your hands, it went up to 27c. and in some instances as high as 30c. per pound.

Now I maintain, that had this system of observations which I now propose, and which I advocated before the war, been in operation, this extreme fluctuation could not have occurred, and farmers would have received millions more from that single crop than they did. The cotton growers of Egppt, India, and Brazil, would have shared with you likewise in these benefits.

The crops may be regarded in one sense as as meteorological expression of the weather from seed time to harvest;—for that there is a physical relation between the weather and the crops is obvious to all. Who shall say that one of the results of this combined system of observations and research will not be the development of that relation and the expanding of it into philosophical rule which shall be a lamp to the husbandman in the casting of his crops.

Like fluctuations, as I have already said, take place with your other staples. I can give you those for wheat in London, for the last 8 years—not the extremes of high and low prices as in cotton, but the yearly average—therefore the fluctuations will not appear so great. The average price per Imperial Quarter (8 Bushels) was:

s	d			s	d		
44	9	for	1863	41	10	for	1865
40	2	"	1864	49	11	"	1866

But the statistician says that in October of this year (1866) when the quality and quantity of the yield were approxmately known— that is when the grain had mostly left the hands of the growers, the price went up to 53s 1d and continued to rise until it averaged

s	d			s	d		
64	6	for	1867	48	2	for	1869
63	9	"	1868	46	11	"	1870

All your staples will vary in price according to the crop, but accurate informatiod, such as is now proposed, as to the promise and yield, will, with the aid of steam and the telegraph to satisfy demands, tend mightily to forbid speculation by preventing fluctuations and maintaining uniformity in prices.

I wrote and lectured upon this subject before the war, and I promised that if you would give me a lock of cotton—an ounce or two— from every bale, I would undertake with that as a fund, to defray all the necessary expenses for forecasting the wealth and the crops, for you; to render to agriculture and the industries of the land, services far more signal and valuable than those which commerce and navigation were then reaping from the wind and current charts; and my researches touching the physics of the sea. Nay, I went further, and promised to give back your oz. of cotton if you would lend me influence with your representatives in Congress, in favor of an act just to permit me to do for the land what I was doing for the sea. I simply sought leave to extend my observations over the country, so as to comprehend all of its industries and bring continents as well as oceans within my field of research. I would, I have always thought, have carried the day then, and won this great boon for science and for you, but for the miserable jealousy of certain persons and so called friends of science in Washington. To defeat this measure, it was represented that the Smithsonian Institution had it already in hand. Why therefore—urged its Secretary—subject the country to needless expense?—That was 14 or 15 years ago; and I now ask what the Smithsonian Institution, has done in this matter, or what good has it ever rendered you or the industries of the country in any way?

For my part, I have ever regarded that Institution as a hindrance to Science, an obstruction to Physical research, and a misfortune to the country. To this day, it stands in the way of a National Academy, which being governed and managed by the scientific men of the NATION, would be the exponent of their views and truly represent American Science.

This Institution does not, never did, and never can represent the science of the country. It is a close corporation, in the management of which, the scientific men of the country have no more voice than they have in the Pacific Railway. It is not a member in the great republic of science as the scientific institutions of the Old World are. It is outside of them all. It is an autocracy, with a man at its head called Secretary, to manage it, who, burning with envyings and jealousies, moves about the public places therein Washington, whispering in the ears of Congressmen and high officials malevolently, against every one who dares to bring before the Government, a proposition for the advancement of science, without first having consulted the Secretary of the Smithsonian Institution.

So I warn you, the Secretary of the Smithsonian Institute will, in all probability oppose this scheme He is more likely to oppose it secretly in committee rooms, as he did before, than openly. Forewarned is forearmed.

The machinery for putting the plan into operation is—so far as this country is concerned—all ready; all it wants is the gearing up. You have your signal office where weather reports are continually received by telegraph, and whence telegraphic forecasts are issued daily, and though this work is so new to officers engaged in it, their progress so far is in the right direction. You have also the Agricultural Bureau, in the service of which, reports, embodying many of the facts and observations required, are already made, or might be without any additional expense. Many of the data which these two offices seek to obtain, stand somewhat in the relation of cause and effect to each other; as for instance, a dry season and bad crops. Your fields have the same area and soil this year that they had last. Your labor upon them is the same. Why is not the yield the same? Simply because the seasons were different.

With this admission, and with all the mind, means and appliances of the age at work, do you mean to say that the relations between the weather and the crops are past finding out.

If I could with just such a system of research for the sea, sit down in my office, and tell the navigator how he would find the winds any season of the year in any part of the ocean through which he wished to sail, am I promising too much when I tell you that by the plan I now propose, the relation between the weather and the crops is in this age as capable of being known as were the relations between sea voyages and the winds.

The system of observations may be so arranged that the two offices may co-operate, each giving the other what it lacks to make its own observations and data complete.

The Agricultural interests are not the only interests to be benefitted by forecasting the weather and crops; and that the money articles that are issued daily from the financial centres of the world, as the great emporiums of commerce, abundantly show. Hence, in the city articles of the London *Times* and other journals, are such expressions as these: "The weather for the last few days, has been unfavorable to the crops: consols and securities generally have been drooping." Or, "The weather is glorious for all growing crops, securities are looking up; even Nottingham laces and stockings feel its influences and are active.

To the relations between the weather and the crops in England, effect the public securities not only there, but all over the world.— Touch the weather and you touch the crops; touch the crops and you touch consols; touch them and you touch the value of all leading articles in trade and the credit and securities of every state, city, and corporation in this country that has paper on the stock boards of Europe or America.

Merchants, bankers, and brokers; all who invest in stocks or deal in public securities, and most of those who buy and sell, have an interest in this matter, and they, as well as planters and farmers are concerned in the aim of these resolutions.

I have drawn my illustration chiefly from cotton. But grain-growers have a larger interest at stake in this matter than even the cotton planters, and so have all who are engaged in the cultivation of staples of whatever kind in any part of the world.

Proper co-operation having been established between the Signal Office and Agricultural Bureau in Washington; let us see what else is required to carry the plan into effect in this country. There would be not much more to do in the meteorological way; for observers are in the field already, some of whom send their observations daily by telegraph, and others at stated periods by mail. These should all go to the Central Office for discussion in connection with the Crop Reports.

I believe the Agricultural Bureau has already in its employ, Agents in the various States to collect agricultural information. Its organization for receiving them monthly or bi-monthly reports, as to the staple crops of the various sections, may, for aught I know, be complete, for I am not informed as to the details of that Office I am under the impression, however, that there is in this Bureau, abundant room for improvement as well in organization as in conduct and management; for its utterances as to yield of crops, are not, in commercial circles, received even with as much confidence as are the private circulars of produce dealers.

The conference would deal with these defects, and give efficiency to both.

The Meteorological Office, though the more recently established is the more deserving of commendation. Its forecasts of the weather are instructive, but they are too vague as yet to be of much practical value. Here is a fair sample of its predictions, called "Probabilities," as any of you may see in the daily papers. I took this from the first paper I happened to lay hands on, with its paragraph of

WEATHER PROBABILITIES.

"WASHINGTON, August 11th.—Clear and warm weather will probably be experienced on Saturday from Missouri to Lake Huron and Westward. A low barometer with cloudy weather will probably continue from Louisiana to West Virginia and eastward. A low barometer with cloudy weather and *local storms* will probably extend during the afternoon over New York and New Dngland."

There is nothing in these "probabilities" that you can utilize. There is no reason why, with the means and appliances under the control of that office, you should not reasonably expect to have timely warning—at least of certain great changes in the atmosphere that you can profit [illegible]. After a while the information—as knowledge and experience increase— may be more specific. But as they are, these "Probabilities" are so vague that shipmasters and farmers who felt a lively interest in them at first, are beginning to ask each other, "*Cui bono?*"

Nevertheless, considering this Office is new, it has made a good beginning. But the time is coming and this plan will hasten it, when these "Probabilities" shonld become "Certainties," and be more specific and practical; for how can such vague things as I have quoted, be utilized? Of what use can it be to any living soul to know that a "low barometer with cloudy weather and *local storms* will probably extend during to-morrow afternoon over New York and New England"?

Now, if it had said what counties and parts of New York and New England these "*local storms*" would reach, and give some idea of their character and severity—whether thunder, wind, rain or hail-storm—we should have something that might be of practical account.

But let us suppose, merely for the sake of illustration and by way of showing the main features of the plan, that the proper meteorological stations have been occupied, and that the observers and co-operators report upon the crops as well as upon the weather; and that at first and in a tentative way, a special crop reporter be assigned to every district of 10,000 square miles in the States. It is his business to travel over his beat continually and to put himself in communication with intelligent farmers in all parts of it; and through them— together with his own observations—to keep the Central Office posted by regular reports (say monthly, at first) as to the state and promise of each one of the rtaple crops of his district. At the same time the Meteorological Observers in the district would send forward their observations and reports in detail, for the same period, also by mail. While the telegraph observers keep up their daily reports, both as to matter and crops.

This would give five crop reporters for Alabama; five for Tennessee, four for Kentucky, and four for Ohio—and so on in this country. In Europe, twelve for Great Britain, nineteen for Franoe, one for Holland, ene for Belgium, and so on.

These reporters would have their attention at the first going off so as not to be lost in a wilderness of data,—directed chiefly: in Alabama to cotton and corn; in Tennessee to corn and wheat; in Kentucky, to corh, wheat, hemp, and tobacco; in Ohio to corn and wheat; and in each State and County to its chief staples only. So far the plan is simple enough, and may be carried out easily for this country, by itself.

But it now requires to bring other nations into the Plan and to include within it the system for the sea, which has been so rich in its results, but which I could not carry out to full harvest through lack of co-operation on the land.

The atmosphere covers the land as well as the sea, and we can never fairly unmask those agents which govern its movements unless we trace them from the sea to the shore and from the land to the water; watching, observing, and studying their action and behavior from the beginning to the end of the storm. The atmospherical machinery as is a whole and it must be studied as a whole; else we can no more comprehend its movements than we can expect a child to understand the mechanism of a watch by simply hearing it tick, and looking at the hands as they move around the dial.

The reward, which the grain grower of the West is to earn for his labor, depends almost as much upon the yield in England & Europe, in Egypt, California and Chili, as it does in the neighbouring States of the Atlantic. Therefore we want to invite all these States to unite with us, and enter upon a system of international research equally beneficial to them and to us, and profitable to the world. The same with regard to the cetton of India, Brazil, Egyt and Peru: the Rice of the Carolinas and the East: the sugar of Louisiana, Cuba, Central America, Brazil, and other parts: the Coffee of Brazil, Java and the East Indies: the hemp of Kentucky and Russia: Indian corn of America, Italy, Austria and other Black sea countries which, in late years, have been competing so stoutly with ours in the English and European markets and so on:—aiming to secure the friendly co-operationt of all States and Nations that are concerned in the production of any of the chief staples of agriculture and so make the system universal.

How to go to work about this, how to interest all people in a common plan requires consultation, good will and co-operation among nations. This we must get through their wise men and meteorologists: and to get them in conference for that purpose, with their governments at their backs, is, wherein your kindly aid and friendlp offices with the Administration are solicited.

As for the collateral advantages that are to flow from this system of research, they are doubtless many and great. They cannot be enumerated or specified in advance, but they will probably equal, if they do not exceed in value, the direct. See what has come from the part of this system that has been tried at sea! Among the first fruits of the system of deep-sea soundings which formed a part of my plan touching the Physics of the sea, was the discovery of a plateau or placid surface across the bed of the Atlantic. I called it the Telegraphic plateau, because it is just such a bed as, at that time, was required for the Telegraphic line to rest upon;—for until then, so little was known about the depths of the ocean, that capitalists were afraid to venture.

Now see how, in these scientific researches, one thing leads to another, and how step by step as we penetrate the secrets of Nature, we ascend a sort of "Jacob's ladder," and gain acquaintance with the very ministers that do the bidding of the Almighty.

The discovery of that plateau led to the leying of the Atlantic Telegraph. It would not work, was faulty, and broke; men of science were employed to investigate; and in their work they established the correctness of an important discovery, laid the foundation for accurate electric measurement, and pointed to means and appliances with the aid of which philosophers are now pushing their researches into the very subtleties of ether.

Compute now the value of submarine telegraphs. Tell if you can, their worth, to Governments, to you, and to every interest in the round world. Go back to the beginning, whether, on one hand, to the frog in the Florentine kitchen, or to the "deep sea" apparatus —a common ball and a bit of twine—and you will see that from small beginnings you have results here far greater in disparity and far more disproportionate between value ot seed and of fruit, than that between the acorn and the oak in your "thick-ribbed man-of-war."

There is in this wide world no field so grand, more rich with promise, and more ready for laborers than that to which these resolutions point.

You remember how comets and eclipses used to alarm mankind. Why do they not create dread and consternation now? Simply because the science of Astronomy has improved and we are able to see that these things when they occur, occur as much in the order of nature as do the changes of the moon and the rising of the sun; and we can foretell their coming with certainty.

Now our ignorance about the movements of the atmosphere and the laws which govern it, is greater than was our ignorance two hundred years ago, about the laws which rule the heavenly hast. That you may be impressed with the grossness of this ignorance, only think of the "signs" many farmers have for foretelling the weather and how empty they are.

The atmosphere must be observed by observers stationed in all parts of the world, and acting in concert, before we can hope to understand its movements and comprehend the laws which govern them. Until some such system of observations be established, we may hope in vain for our children's children to see the science of meteorology assume the dignity or claim the accuracy that belonged to astronomy, in the days of our great grandfathers.

I appeal to you, therefore, not only as husbandmen, for your own sake, but as philosophers, philanthropists and friends of science also, to lend me your assistance in this scheme.

Europe is ripe for it. There has just been held there a grand International Congress for the advancement of cosmographic, geographical and commercial knowledge. I submitted this plan then. A correspondent writes: "Your resolutions for an Agricultural and Meteorological Conference—international—were received with cheers, and by unanimous vote, ordered to be printed with proceedings." This is a good omen and a happy auspice. It is now for you to help me "put the ball in motion" here.

VIRGINIA MILITARY INSTITUTE,
Lexington, Va., Sept. 1871.

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*NOTE.—The statistics of the Corn Exchange, New York, show that from the first to the middle of August, the price of wheat ruled from 130c. to 133c. per 60 lbs., No. 2, and from 133c to 135c., No. 1. And on the 26th of September, No. 2 brought 150@151c., No. 1 being then worth 155 cents.

McTAVISH.

It is now, October, quoted at $1 80.

*MAURY BROTHERS: New York.